LIBERIA MEDICINES & HEALTH PRODUCTS REGULATORY AUTHORITY (LMHRA)

VP Road, Old Road
Monrovia, Liberia

GUIDELINES FOR POST-MARKET SURVEILLANCE OF IN-VITRO DIAGNOSTICS

Version No 002

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The project IGORCADIA, which commenced in December 2017, seeks to develop the capacity of LMHRA to regulate, register and license the importation, storage, and use of diagnostics alongside supervision and inspection of use of diagnostics in research. IGORCADIA has a Technical Working Group comprised of LMHRA staff including the Project Local Coordinator and Leader of IVD Regulatory Development, Mr. Alexander E. George, Pharm. Henry K. Gbormoi, Sr. and Pharm. Diana M. Jeator, as well as Prof. Ezekiel Hallie, Dean of the School of Pharmacy. All these persons, along with the Legal Officer of LMHRA, Cllr. Bohley Comehn are herein acknowledged as resource persons involved in the drafting of guidelines for the regulation of in-vitro diagnostics by LMHRA. Special gratitude is also owed to the Managing Director of LMHRA, Hon. David Sumo who provided the overall supervision of this project, as well the former Local Project Coordinator, Hon. Joseph N. Somwarbi of the National Legislature of Liberia, formerly of LMHRA.

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The LMHRA will welcome comments for improvement of the guidelines during implementation.

LIST OF ABBREVIATIONS

AE	Adverse Events
CAPA	Corrective and Preventive Action
CMO	Chief Medical Officer
EMI	Electromagnetic interference
FSCA	Field Safety Corrective Action
GDP	Good Distribution Practice
GPP	Good Pharmacy Practice
GSP	Good Storage Practice
HQ	Headquarters
IMDRF	International Medical Devices Regulation
IRB	Institutional Review Board
IVD(s)	In-Vitro Diagnostic(s)
LMHRA	Liberia Medicines & Health Products Regulatory Authority
MAH	Marketing Authorization Holder
NGO	Non-Governmental Organization
PMS	Post-Market Surveillance
POE(s)	Port(s) of Entry
PSURS	Periodic Safety Update Reports
SOPs	Standing Operating Procedures
WHO	World Health Organization

GLOSSARY

For the purpose of these guidelines the following terms shall be defined as follows:

Abnormal Use = Act or omission of an act by the operator or user of a medical device as a result of conduct which is beyond any means of risk control by the manufacturer.

Batch or Lot Number = A distinctive combination of numbers and/or letters which uniquely identifies a batch on the label.

Corrective Action and Preventive Action = Action to eliminate the cause of a potential nonconformity or other undesirable situation. Corrective action is taken to prevent recurrence whereas preventive action is taken to prevent occurrence.

Field Safety Corrective Action (FSCA) = An action taken by a manufacturer to reduce a risk of death or serious deterioration in the state of health associated with the use of a medical device that is already placed on the market.

Field Safety Notice (FSN) = A communication to customers and/or users sent out by a manufacturer or its representative in relation to a Field Safety Corrective Action.

Final Report = The last report that the manufacturer is expected to submit about the reportable event. It is a written statement of the outcome of the investigation and of any action. A final report may also be the first report.

Follow-up Report = A report that provides supplemental information about a reportable event that was not previously available

Harm = Physical injury or damage to the health of people, or damage to property or the environment.**Immediately** = Without any delay that could not be justified.

Incident = Any malfunction or deterioration in the characteristics and/or performance of a device, as well as any inadequacy in the labeling or the instructions for use which, directly or indirectly, might lead to or might have led to the death, serious injury or serious threat to public health.

Indirect Harm = Actions taken as a consequence of a medical decision taken/not taken on the basis of information or result(s) provided by the IVD; for example: misdiagnosis, delayed diagnosis, delayed treatment, inappropriate treatment, transfusion of inappropriate materials

Intended Purpose = The use for which the IVD is intended according to the data supplied by the Manufacturer on the labeling, in the instructions and/or in promotional materials.

In Vitro Diagnostics = A device, whether used alone or in combination, intended by the manufacturer for the in vitro examination of specimens derived from the human body solely or principally to provide information for diagnostic, monitoring or compatibility purposes. This includes reagents, calibrators, control materials, specimen receptacles, software, and related instruments or apparatus or other articles.

Labeling = Written, printed or graphic matter affixed to an IVD or its container or wrapper, related to identification, technical description and use of the IVD, but not excluding shipping documents.

Local Responsible Person = A person residing in Liberia or corporate body registered in Liberia who has received a mandate from the Applicant to act on his behalf with regard to matters pertaining to registration of IVDs.

Manufacturer = The natural or legal person with responsibility for the design, manufacture, packaging and labeling of an IVD before it is placed on the market under his own name, regardless of whether these operations are carried out by that person himself or on his behalf by a third party.

Near Adverse Event: This is an event that might have led to a death or serious injury. It may be that due to the timely intervention of a healthcare practitioner a death or serious injury did not occur. For an event to be defined as a near adverse event, it is sufficient that: An event associated with the device happened if the event occurred again, it might lead to death or serious injury testing or examination of the device or the information supplied with the device, or scientific literature indicated some factor that could lead to a death or serious injury.

Operator = Person handling equipment

Periodic Summary Safety Reporting = An alternative reporting regime that is agreed between the manufacturer and the LMHRA for reporting similar adverse events/incidents with the same device or device type in a consolidated way where the root cause is known or FSCA has been implemented.

Quarantined Stock = The stock of product that has been put on hold for destruction or rework. The stock has been released for sale and has not yet been dispatched or has not left the direct control of the licensed manufacturer / licensed importer/ licenses wholesaler/ licensed distributor.

Recall = Any action taken by its manufacturer, importer, supplier or registrant to remove the medical device from the market or to retrieve the medical device from any person to whom it has been supplied, because the medical device may- i. be hazardous to health; ii. fail to conform to any claim made by its manufacturer or importer relating to its quality, safety or performance; or iii. not meet the requirements as stipulated in the regulations.

Risk = The possibility of loss, damage or any other undesirable event.

Risk Assessment = Identifying and characterizing the nature, frequency, and severity of the risks associated with the use of a product conducted throughout the product's lifecycle, from the early identification of a product as a candidate, through the pre-marketing development process, and after marketing.

Risk Management = Systematic application of policies, procedures, and practices to the analysis, evaluation, and control of risks.

Serious deterioration in the state of health = i. Life-threatening illness ii. Permanent impairment of body function or permanent damage to a body structure; iii. A condition necessitating medical or surgical intervention to prevent a) or b); iv. Examples: - clinically-relevant increase in the duration of a surgical procedure a condition that requires hospitalization or significant prolongation of existing hospitalization;

Serious Public Health Threat = Any event type, which results in imminent risk of death, serious deterioration in state of health or serious illness that requires prompt remedial action. This could include: i. Events that are significant and unexpected in nature such that they become alarming as a potential public health hazard, e.g. human immunodeficiency virus (HIV) or Hepatitis B ii. The possibility of multiple deaths occurring at short intervals

Trend Report = Information supplied as a result of follow up and establishment of trend of adverse events associated with the use of IVDs.

User = The health care institution, professional, caregiver or patient using or maintaining IVDs

Use Error = Act or omission of an act, that has a different result to that intended by the manufacturer or expected by the operator of the IVD.

Withdrawal = The total withdrawal of an IVD from the market.

INTRODUCTION

The registration of In-vitro diagnostics (IVDs) in Liberia is governed by the provisions and requirements of the LMHRA Act of September, 2010. This guideline provides a reference document detailing the regulatory requirements for reporting of adverse events, post-marketing vigilance and

monitoring requirements and recall of IVDs in Liberia and describes the information to be supplied to the Regulatory Authority in Liberia. The information submitted will be evaluated in terms of the provisions of the Act of 2010.

IVDs should be continually assessed so as to critically determine their safety and performance when they are in use. This is due to the fact that information gathered during pre-marketing phase is incomplete with regard to adverse events that may occur while the device is in use. This is mainly because no amount of rigor in the pre-marketing review process can predict all possible device failures or events arising from their right use and misuse. It is through their actual use the unforeseen problems related to safety and performance can occur.

The purpose of post-market surveillance is to protect individual health and public health through continued surveillance of IVDs once they are placed on the market (i.e., in circulation for use other than the purposes of research/experiments) by reducing any risks. Such activities should ensure the manufacturer's obligations are fulfilled through ensuring they are aware of event which enables them to undertake an assessment of any risks, and as appropriate any suggested steps to risk mitigation.

In the context of the WHO Prequalification of In Vitro Diagnostics Programme, this guidance aims to ensure the on-going compliance of WHO prequalified IVDs with WHO prequalification requirements once they are placed on the market. Manufacturers of WHO prequalified IVDs are obliged to report regularly post-market information to the relevant national regulatory authorities.

Objective and Scope

The purpose of IVD vigilance is to improve the health and safety of patients, users, and others by reducing the likelihood of adverse events being repeated. This can be achieved by:

- evaluating reported adverse events
- disseminating information that could be used to prevent or minimize the consequences of adverse events, where appropriate
- post-marketing vigilance for IVDs. (This includes the management of safety data which arises during post-registration and post-marketing performance and clinical trials.)
- post-market assessment on end-user compliance with IVD instructions as per manufacturer's recommendations
- modifying the IVD
- removing or recalling the IVD from the market

This guideline is intended to assist LMHRA achieve the above objectives with the co-operation of all stakeholders (manufacturers, wholesalers and distributors) of IVDs .

If there is a problem with an IVD or the way in which it is being used, the licensed manufacturer and the Importer or licensed wholesaler and distributor will first conduct an investigation and decide on the appropriate action. One of these actions may require notifying or obtaining further advice from the Regulatory Authority. Some actions that may need to be taken could include:

- informing the users of the IVD,
- making corrections to the IVD,
- removing, i.e. recalling the IVD from the market.

The types of IVDs include all products classified as per the different Classes based on a risk assessment and intended use.

All IVDs for supply in Liberia must continue to meet all the regulatory, safety and performance requirements and any applicable standards.

Whenever there is doubt, applicants are advised to consult the Regulatory Authority (LMHRA) for confirmation and/or clarification. Regarding reporting; please refer to the website for contact details.

Guidelines are constantly being updated as a result of scientific developments and harmonization of the requirements of regional and international regulatory authorities. LMHRA endeavours to regularly update the guidelines to reflect current thinking and keep its technical requirements and evaluation policies in line with "best international IVD regulatory practice".

Rationale for Post-Market Surveillance of IVD: The lack of regulatory oversight of IVDs in many countries, both for pre-market assessment and post-market activities, has widely been acknowledged as a shortcoming for assuring the safety, quality and performance of IVDs. The type of IVDs that are most appropriate and well adapted for use in resource-limited settings are often used in jurisdictions without existing comprehensive regulatory control; thus they may escape any stringent pre-market and post-market regulatory oversight.

A degree of pre-market assessment of IVDs is recommended for any product prior to entry into the marketplace in each country of intended use. While pre-market assessment of IVDs can provide information on a product's safety, quality and performance, there might be questions that cannot be answered in the pre-market stage or issue that may arise after the product is marketed.

The safety, quality and performance of IVDs should be further verified upon delivery and before distribution to laboratories and other testing sites. Post-market information on IVDs empowers NRAs and WHO to detect, investigate, communicate and contain events that threaten public health security and to take appropriate action.

CHAPTER ONE

REPORTING GUIDANCE

1.1 Who to Report IVD Adverse Event (AE)

End-users, suppliers and manufacturers can report AE related to IVD as a whole (i.e., whole kit) and also on any of its parts or separate components (reagents, software, buffer, lancets, plates, etc.).

1.2 Report by End-Users

IVD end-users should immediately report any suspected adverse event associated with the use of the device.

1.2.1 What to Report: User should report adverse events/incidents that meet EITHER of the following criteria:

A. ***An event has occurred***: An adverse event/incident related to IVD that has led or may lead to mild or moderate or serious threat to public health or death or serious injury if one or more of the following events occur but not limited to:

i. A malfunction or deterioration in the characteristics;
ii. An incorrect or out of specification test result;
iii. The discovery of a design defect during design review;
iv. An inaccuracy in the labeling, instructions for use and/or promotional materials;
v. The discovery of a serious public health threat;
vi. Inappropriate therapy;
vii. Unanticipated adverse reaction or unanticipated side effect;
viii. User Error
ix. Degradation/destruction of the IVD (e.g. fire);
x. Interactions with other substances or products;
xi. False positive or false negative test result falling outside the declared performance of the test;
xii. Deficiency of an IVD found by the user prior to its use;
xiii. Other information becoming available.

B. ***The IVD is associated with the adverse effect***; In assessing the link between the device and the event, the following should be taken into account:

i. The opinion, based on available information, from a healthcare professional;
ii. Information concerning previous, similar events
iii. Complaint trends

This judgment may be difficult when there are multiple components of the IVD are involved. In complex situations, it should be assumed that the IVD was associated with the event.

C. ***The adverse effect led to one of the following outcomes*:**

Death of a Patient, User or Other Person

i. *A serious injury or serious deterioration to a patient, user or other person*, including a life-threatening illness or injury, permanent impairment of a body function, permanent damage to a body structure and a condition necessitating medical or surgical intervention to prevent permanent impairment of a body function or permanent damage to a body structure.
ii. *A near adverse event*: This is an event that might have led to a death or serious injury. It may be that due to the timely intervention of a healthcare practitioner a death or serious injury did not occur. For an event to be defined as a near adverse event, it is sufficient that: An event associated with the device happened if the event occurred again, it might lead to death or serious injury testing or examination of the device or the information supplied with

the device, or scientific literature indicated some factor that could lead to a death or serious injury.

1.2.2 When to Report: Users are encouraged to report all adverse events/ incidents as soon as possible. The User should report adverse events/incidents that meet EITHER of the following criteria:

i. For the Adverse event/incident that results in death, serious injury or represent serious public health threat must be reported immediately within 24 hours by phone, fax or email followed by completed report within 15 calendar days.

ii. All other adverse events/incidents should be reported not later than 30 calendars days following the date of awareness of the event.

Initial incident reports should contain as much relevant detail as is immediately available, but reporting should not be delayed for the sake of gathering additional information.

1.2.3 How to Report: Adverse Events/Incidents should be reported in an *IVD adverse event/incident reporting form* for consumers and facilities as provided in **Annex I**.

The form is available online at www.lmhra.org, at the LMHRA Head Office, or at the nearest LMHRA zonal offices. The form should be appropriately filled in and submitted electronically (email or online) or physically to LMHRA.

All reports submitted will be kept CONFIDENTIAL.

Note: The forms will be provided free of charge by LMHRA and as they are already prepaid, reporters will not be charged for the form.

1.2.4 Where to Report: In general, the adverse event/incident report should be sent to:

i. Online

ii. At LMHRA Headquarter Offices: Report should be sent to:
The Managing Director
Liberia Medicines & Health Products Regulatory Authority (LMHRA)
VP Road, Old Road
Monrovia, Liberia

iii. LMHRA Zonal Offices

1.3 Report by Manufacturers

1.3.1 What to be reported

If the manufacturer's IVD caused or suspected to cause an event which meets all of the three basic reporting criteria listed below is considered as an adverse event/incident and must be reported to LMHRA by the manufacturer.

A. An event has occurred

An adverse event/incident related to an IVD that has led or may lead to mild or moderate or serious threat to public health or death or serious injury if one or more of the following events occur but not limited to:

i. A malfunction or deterioration in the characteristics or performance.

ii. An incorrect or out of specification test result

iii. The discovery of a design defect during design review

iv. An inaccuracy in the labeling, instructions for use and/or promotional materials.
v. The discovery of a serious public health threat.
vi. Inappropriate therapy
vii. Unanticipated adverse reaction or unanticipated side effect
viii. User Error
ix. Degradation/destruction of the device (e.g. fire)
x. Interactions with other substances or products
xi. False positive or false negative test result falling outside the declared performance of the test.
xii. Deficiency of a device found by the user prior to its use;
xiii. Other information becoming available.

B. The IVD is associated with the Adverse Event

In assessing the link between the IVD and the event, the following should be taken into account:

i. The opinion, based on available information, from a healthcare professional.
ii. Information concerning previous, similar events.
iii. Complaint trends
iv. Other information held by the manufacturer.

This judgment may be difficult when multiple components of the IVD are involved. In complex situations, it should be assumed that the IVD was associated with the event.

C. The adverse effect led to one of the following outcomes:

i. Death of a patient, user or other persons;
ii. A serious injury or serious deterioration to a patient, user or other person, including a life-threatening illness or injury, permanent impairment of a body function, permanent damage to a body structure and a condition necessitating medical or surgical intervention to prevent permanent impairment of a body function or permanent damage to a body structure;
iii. A near adverse event: This is an event that might have led to a death or serious injury. It may be that due to the timely intervention of a healthcare practitioner a death or serious injury did not occur.

For an event to be defined as a near adverse event, it is sufficient that:

- it is associated with the IVD and if the event occurred again,
- it might lead to death or serious injury testing or examination of the IVD or
- the information supplied with the device, or
- scientific literature indicated some factor that could lead to a death or serious injury.

1.3.2 When to report: Upon becoming aware that an event has occurred and that one of its devices may be associated with the adverse event/incident, the IVD Manufacturer must report that event in the timeline as follows:

- Adverse events that results into death or injury or represent a serious public health threat must be reported immediately, but not later than 24 hours by telephone or email, followed by written completed report (**format is provided in Annex II**) within 15 calendar days;
- All other events must be reported not later than 30-elapsed calendar days following the date of becoming aware of the event

1.3.3 Types of reports

The incident reports submitted by the manufacturers to LMHRA may be in the form of:

i. Initial report
ii. Follow up report
iii. Final report, or
iv. Trend report

1.3.4 How to report

Adverse event/Incident should be reported in a Manufacturer IVD incident reporting form as provided in **Annex III**.

The form is available at the LMHRA web site (www.lmhra.org) or at the Head Offices and it should be appropriately filled in and submitted to LMHRA either as a hard copy or via e-mail or through telephone. The form can also be submitted through the Manufacturers' local agent.

1.3.5 Where to report

Reports of the incidents made:

i. Online
ii. At LMHRA Headquarter Offices: Report should be sent to:

The Managing Director
Liberia Medicines & Health Products Regulatory Authority (LMHRA), VP Road, Old Road
Monrovia, Liberia

iii. LMHRA Zonal Offices

1.3.6 Field Safety Corrective Action (FSCA)

Manufacturers in consultation with LMHRA may carry out FSCA when necessary; The FSCA may include:

i. Collect the IVD from the supplier;
ii. IVD modification such as permanent or temporary changes to the labeling or instructions for use
iii. IVD exchange;
iv. IVD destruction;
v. Retrofit by purchaser of manufacturer's modification or design change;
vi. Advice given by manufacturer regarding the use of the IVD (e.g. where the IVD is no longer on the market or has been withdrawn but could still possibly be in use e.g. implants or change in analytical sensitivity or specificity)

Field Safety Corrective Action template form is attached as **Annex IV**.

1.3.6.1 Notification to LMHRA (Field Safety Notification)

The manufacturer should issue a notification to LMHRA and other Regulatory Authorities of all countries affected at the same time. This notification should include all relevant documents necessary for LMHRA to monitor the FSCA, e.g.

i. The affected IVD and serial/lot/batch number range
ii. Identity of the manufacturer/Local Responsible Person
iii. Relevant parts from the risk analysis
iv. Background information and reason for the FSCA (including description of the IVD deficiency or malfunction, clarification of the potential hazard associated with the continued use of the IVD and the associated risk to the patient, USER or

other person and any possible risks to patients associated with previous use of the affected IVD.)

v. Description and justification of the action (corrective/preventive)

Advice on actions to be taken by the supplier/distributor of the IVD (include as appropriate):

i. Identifying and quarantining the IVD,
ii. Method of recovery, disposal or modification of the IVD
iii. Recommended patient follow up
iv. A request to pass the field safety notice to all those who are in need to be aware of it within the organization and to maintain awareness over an appropriate defined period
v. A request for the details of any affected IVDs that have been transferred to other organizations, to be given to the manufacturer and for a copy of the field safety notice to be passed on to the organization to which the IVD has been transferred.
vi. In the case of an action concerning lots or parts of lots an explanation why the other devices are not affected
vii. A copy of the field safety notice. This should be done before or at the same time as FSCA is being issued.

Note: Normally, the manufacturer should allow a minimum of 48 hours for receipt of comment on the Field Safety Notification unless the nature of the FSCA dictates a shorter timescale e.g. for serious public health threat.

1.3.6.2 Notification to the suppliers or importers or Health facilities

A communication to customers (IVD representatives/suppliers/distributors or health facilities) sent out by a manufacturer or its representative in relation to a Field Safety Corrective Action. Unless duly justified by the local situation, a uniform and consistent field safety notice should be offered by the manufacturer to all affected countries. Notification shall be made by using a format provided in Annex V.

The manufacturer should use a distribution means ensuring the appropriate organizations have been informed, e.g. by confirmation of receipt. The field safety notices should be on a company letterhead, be written in English (as approved by LMHRA) and include the following:

i. A clear title, with "Urgent FIELD SAFETY NOTICE" followed by the commercial name of the affected IVD product, an FSCA-identifier (e.g. date) and the type of action.
ii. Specific details to enable the affected IVD product to be easily identified e.g. type of IVD, model name and number, batch/lot or serial numbers of affected IVDs and part or order number.
iii. A factual statement explaining the reasons for the FSCA, including description of the IVD deficiency or malfunction, clarification of the potential hazard associated with the continued use of the IVD and the associated risk to the patient, USER or other person and any possible risks to patients associated with previous use of affected IVDS.
iv. Advice on actions to be taken by the USER. Include as appropriate: *Identifying and quarantining the device, Method of recovery, disposal or modification of*

device, recommended review of patient's previous results or patient follow up, Timelines.

v. A request to pass the field safety notice to all those who need to be aware of it within the organization and to maintain awareness over an appropriate defined period.

vi. If relevant, a request for the details of any affected IVDs that have been transferred to other organizations, to be given to the manufacturer and for a copy of the field safety notice to be passed on to the organization to which the IVD has been transferred.

vii. If relevant, a request that the recipient of the FIELD SAFETY NOTICE alerts other organizations to which incorrect test results from the use of the devices have been sent. For example, failure of diagnostic tests

viii. Confirmation that LMHRA has been advised of the FSCA.

ix. Any comments and descriptions that attempt to: *play down the level of risk in an inappropriate manner* or *advertise IVD products or services* should be omitted

x. Contact point for customers - how and when to reach the designated person.

xi. An acknowledgment form for the receiver might also be included (especially useful for manufacturer's control purposes).

CHAPTER 2

ROLES OF VARIOUS STAKEHOLDERS IN THE PMS OF IN-VITRO DIAGNOSTICS

2.1 Importer/Supplier/Manufacturer

Importers/suppliers/manufacturers should have suitable vigilance system in place and must take full responsibility and liability for IVD product(s) which have been granted market authorization and must ensure that appropriate action(s) can be taken at any time when there is an issue concerning safety. They are responsible for the following:

- Inform LMHRA immediately on any adverse event/incidents of their IVD product(s),
- Submit report on adverse event/incidents occurring outside Liberia,
- Inform LMHRA on any safety issue(s) or action(s) taken by foreign agency, including the basis for such action(s),
- Investigate and assess the adverse event/incidents and take any corrective action necessary.
- Submit trend report, periodic safety update report(s) (PSURs) for the marketed product to LMHRA, in addition the Authority may request the manufacturer to demonstrate that the applied method is appropriate for the particular case (applicable to manufacturer).
- Carry out field safety corrective actions of their products and notify LMHRA about the results (applicable to manufacturer).
- Promote events/incidents reporting by users.
- Conduct IVD tracking and post marketing studies.
- Conduct risk management related to the devices and submit the reports to LMHRA.

Note: Where an incident occurs as a consequence of the combined use of two or more separate IVDs (and/or accessories) made by different manufacturers, each manufacturer should submit a report to the Authority.

2.2 Users

2.2.1 Patients or Consumers

i. Patients or consumers should report immediately any suspected adverse events associated with the use of an IVD preferably to a facility where the IVD was obtained or at the nearest health facility, health care provider, pharmacy, CMO's office or directly to LMHRA.

ii. The IVD together with the relevant packaging material should be returned to a facility where the report has been filed.

2.2.2 Health Facilities

Health facilities should:

i. Receive and distribute LMHRA Adverse Events (AEs) reporting forms to health care providers and patients to whom the physician has prescribed a take-home IVD.;

ii. Detect, investigate, manage and report AEs and take appropriate action to prevent AEs;

iii. Conduct preliminary identification of AE signals and other risk factors;

iv. Communicate appropriate safety information to health management teams and the community including patients;

v. Organize and conduct staff training and sensitization on matters related to AEs;

vi. Maintain a register of suspected AEs at all times;

vii. The IVD should be returned to the manufacturer or to the importer/supplier in accordance with their instructions after notification has been submitted to LMHRA

Note: The IVD in question and its accessories together with relevant packaging materials should not be repaired, tampered with or discarded (applicable to all users).

2.2.3 LMHRA Headquarters Office

LMHRA headquarters shall:

i. Develop, review and distribute adverse events/incidents reporting tools and collect reports of AEs/incidents from the market,

ii. Acknowledge receipt of AE/incident reports from users, importers/suppliers, manufacturer, and LMHRA zonal offices,
iii. Conduct relatedness/causality assessment of adverse event/incident reports, and analyze trend reports, periodic safety reports and other related reports.
iv. Collect and communicate relevant safety information to all stakeholders,
v. Link with WHO PQ program and International Medical Devices Regulators Forum (IMDRF) and share information on adverse event/incident,
vi. Provide feedback to reporters,
vii. Identify signals and take appropriate regulatory action(s) based on signals generated,
viii. Conduct risk evaluation including; risk assessment of an Incident or FSCA reported and monitoring of manufacturers subsequent actions
ix. Communicate immediately to all responsible parties when an AE/incident has been reported and should issue press statement once the AE/incident has been confirmed.

2.2.4 LMHRA Zonal Offices

LMHRA Zonal Offices shall:

(i) Receive and distribute adverse events/incidence reporting tools to the relevant stakeholders.
(ii) Collect, screen and record AE/incidence reports into a register and send the reports directly to LMHRA headquarter offices for further processing,
(iii) Receive safety alerts from LMHRA headquarter offices and share them with health care providers and patients,
(iv) Respond to queries and provide feedback information related to adverse events/incidence, and
(v) Monitor and evaluate implementation of vigilance activities in the respective zones.

CHAPTER 3

RISK MANAGEMENT

Like any medical device, an IVD on the market has associated risks. At the time of device approval, certain safety and effectiveness questions may not be fully resolved due to significant obstacles, such as the time and cost involved to address possible rare adverse events or long-term safety issues, and because controlled clinical studies do not fully represent the benefit-risk profile of an IVD when used in real-world clinical practice.

Manufacturers should manage risk of their product throughout its entire lifecycle to monitor whether the risks continue to remain acceptable and whether any new hazards or risks of illness or injury

associated with the use of the IVD for its intended uses and conditions of use are discovered. The risk management procedures shall be directly linked to the manufacturer's post-marketing surveillance procedures.

Objectives relating to IVD safety should be a major part of the overall quality objectives of the manufacturer. Manufacturers should plan and perform internal quality audits to verify whether risk management activities and related results comply with planned and established procedures. The internal audits should ensure the continued effectiveness of the risk management system. Risk management activities should begin as early as possible in the design and development phase, when it is easier to prevent problems rather than correcting them later.

If at any time, a risk is determined to be unacceptable, the existing risk analysis should be re-examined and appropriate action taken to meet the risk acceptability criteria. If a new hazard is identified, four phases of risk management should be performed.

After release of the device to market, risk management activities should be linked to quality management processes, for example, production and process controls, corrective and preventive actions (CAPA), servicing and customer feedback.

3.1 Risk Management Plan

Risk management planning needs to span the entire life cycle of an IVD. The plan should include the following:

i. Scope of the plan, IVD and the life cycle phases

ii. Design development process

iii. Risk management activities and methods

iv. Verification plan for risk control measures

v. Reviews

vi. Allocation of responsibilities

vii. Criteria for risk acceptability

The following risk management activities should be included in the plan:

i. Establishment of risk acceptability criteria

ii. Risk analysis

iii. Hazard Identification

iv. Risk analysis methods

The following risk management tools should be considered for analysis and validation:

i. Preliminary Hazards Analysis (PHA)

ii. Fault Tree Analysis (FTA)

iii. Failure Mode Effect Analysis (FMEA)

iv. Failure Mode Effect and Criticality Analysis (FMECA)

v. Hazard and Operability Study (HAZOP)

vi. Hazard Analysis and Critical Control Point (HACCP)

vii. Risk evaluation including: Risk benefit analysis, Assessment of risks and Assessment of benefits.

viii. Risk control and monitoring

Risk control activities may begin as early as design input and continue through the design and development process, manufacturing, distribution, installation, servicing and throughout the IVD life cycle.

Risk control measures may be examined in the following order: i. Inherent safety by design; ii. Protective measures in the device or its manufacture; iii. Information for safety, such as warnings, etc., and iv. Overall risk evaluation

3.2 User-Related Hazards Risk Management

Manufacturer should undertake efforts to control user-related hazards. The goal is to minimize use-related hazards, assure that intended users are able to use IVDs safely and effectively throughout the product life cycle. Risk Management will help to identify, understand, control and prevent failures that can result in-hazards when people use IVDs.

The following hazards typically should be considered in risk analysis: chemical hazards (e.g., toxic chemicals), Mechanical hazards (e.g., kinetic or potential energy from a moving object), thermal hazards (e.g., high temperature components), electrical hazards (e.g., electrical shock, electromagnetic interference (EMI)), and radiation hazards (e.g. ionizing and non-ionizing) and biological hazards (e.g., allergic reactions, bio-incompatibility and infection).

Thorough consideration of use-related hazards in risk management processes should include the following tasks:

i. Identify and describe use-related hazards through analysis of existing information
ii. Apply empirical approaches using representative device users, to identify and describe hazards that do not lend themselves to identification or understanding through analytic approaches,
iii. Estimate the risk of each use-related hazard scenario.
iv. Develop strategies and controls to reduce the likelihood or mitigate the consequences of use-related hazard scenarios.
v. Select and implement control strategies.
vi. Ensure controls are appropriate and effective in reducing risk,
vii. Determine if new hazards have been introduced as a result of implementing control strategies,
viii. Verify that functional and operational requirements are met, and
ix. Validate safe and effective device use.

Human factors should be considered in user device risk management. Human Factors engineering considerations and approaches should be incorporated into the design and risk management processes/activities in the following essential steps:

i. Identify anticipated (derive analytically) and unanticipated (derived empirically) user related hazards.

ii. Describe how hazardous use scenarios occur (prioritize and assess risks of use-related hazards),

iii. Develop, mitigate verify strategies to control use-related hazards Use-related hazards often require a combination of mitigation and control strategies.

The following list presents the order of overall priority for applying strategies to control or mitigate risks of use-related hazards:

i. Modify IVD design to remove hazard or reduce its consequences;

ii. Make user interface, including operating logic, error tolerant (safety features):

iii. Alert users to the hazard.

iv. Develop written procedures and training for safe operation.

v. Determine if the risks related to device use are acceptable and determine if new hazards have been introduced.

vi. Demonstrate safe and effective IVD use (validation).

3.3 Documentation of Risk Management Activities

Design and development activities targeted at controlling risks should be supported by documentation. Documents or records resulting from risk management activities such as risk management procedures, reports, etc. should be maintained or referenced in either a risk management file or other appropriate files (e.g., Design History File, Technical File/Technical Documentation, Design Dossier, Device Master Record, Device History Record, or Process Validation file.

3.4 Traceability

Risk management data should be utilized to define which devices, components, materials and work environment conditions require traceability. Risk management activities should be used to establish criteria for traceability. Points to be considered include:

i. Origin of components and materials;
ii. Processing history;
iii. Distribution and location of the IVD after delivery (to the first consignee);
iv. Intended use of the IVD (i.e., life sustaining, life supporting, or implantable);
v. Probability of failure;
vi. Need for safety related updates (i.e. recalls, advisory notices, field updates, etc.);
vii. Consequence of the failure for patients, users or other persons.

In defining the records required for traceability, the manufacturer should consider all those devices, components, materials and work environmental conditions, which could cause the IVD not to satisfy its specified requirements including its safety requirements.

3.5 Internal and External Communication

Within the quality management system, consideration needs to be given to internal and external communication throughout the entire IVD life-cycle. The type and depth of the communication

should be appropriately tailored to the target audience. Internal communication is necessary for all appropriate personnel to be aware of the remaining risks even after implementing risk control measures. External communication methods such as warning labels, user manuals, advisory notices, etc., should also be utilized to communicate necessary risk information.

CHAPTER 4

IVD TRACKING AND PMS METHODOLOGIES

4.1 Tracking of In-Vitro Diagnostics

LMHRA may require that manufacturers to track their IVDs. Tracking is intended to facilitate notification and recall in the event an IVD presents a serious risk to health that requires prompt attention. IVD tracking enables LMHRA to require a manufacturer to promptly identify product distribution information and remove an IVD from the market.

LMHRA requires tracking from the manufacturers for the following classes of IVDs:

i. A Class B, C or D IVD for which failure would be reasonably likely to have a serious adverse health consequence;
ii. A class B, C or D IVD expected to have significant use in pediatric populations;
iii. A class B, C or D IVD intended to be implanted in the human body for more than one year; and
iv. A class B, C or D IVD intended to be a life-sustaining or life-supporting device used outside of a user facility.

LMHRA has discretion on whether to order tracking for IVDs that meet the regulatory requirements or to release IVDs from tracking based on additional factors and other relevant information that comes to the Agency's attention. The following additional factors may be considered to determine whether a tracking order should be issued:

i. Likelihood of sudden, catastrophic failure;

ii. Likelihood of significant adverse clinical outcome; and

iii. The need for prompt professional intervention.

The LMHRA may order a post-approval study as a condition of approval for an IVD approved under a premarket approval. Typically, post-approval studies are used to assess IVD safety, effectiveness, and/or reliability in the real-world setting, including long-term effects. The study can also be used to assess the learning curve, effectiveness of training programs and how well device performs in certain groups of patients.

When LMHRA determines that an IVD should no longer be tracked, it will notify the manufacturer by direct communication. The manufacturer will be required to notify health professionals and patients in the event of unreasonable risk of substantial harm associated with the IVD.

The following are examples of post market issues which might require tracking of an IVD:

- New or expanded conditions of use for existing IVDs
- A manufacturer might be requested to conduct post market surveillance to augment premarket data to obtain more experience with change from hospital use to use in the home or other environment or with new patient populations.
- Significant changes in IVD characteristics (technology)
- LMHRA might have questions that arise from significant or developmental changes to IVD technology that can be most appropriately addressed in the post market period. Also concerns that changes in the technology of an IVD may affect the duration of the effectiveness of the device, which could be addressed by post market surveillance. In these situations, post market surveillance, through collection of longer-term safety and effectiveness data, may augment premarket data and allow earlier marketing of new technologies without compromising the public health.
- Longer term follow-up or evaluation of rare events

A manufacturer might be requested to conduct post market surveillance to address longer term or less common safety and effectiveness issues of implantable and IVDs for which the premarket testing provided only limited information. For example, premarket evaluation of the IVD may have been based on surrogate markers. Once the device is actually marketed, post market surveillance may be appropriate to assess the effectiveness of the device in detecting or treating the disease or condition, rather than the surrogate. Data collected during post market surveillance may include rates of malfunction or failure of an IVD intended for long-term use or incidents of latent sequel resulting from IVD use.

Public health concern(s) resulting from reported or suspected problems in marketed devices
A manufacturer might be requested to conduct post market surveillance to better define the association between problems and devices when unexpected or unexplained serious adverse events occur after an IVD is marketed; if there is a change in the nature of serious adverse events (e. g., severity); or if there is an increase in the frequency of serious adverse events.

4.2 Timelines

Manufacturers will have 3 working days to provide critical information about devices that have not yet been distributed to a patient and 10 working days for IVDs that have been distributed to patients. If a post marketing surveillance (PMS) is requested, the PMS plan shall be submitted within 30 days from the date of the PMS order (letter).

4.3 Post Marketing Methodologies

The following examples illustrate a range of surveillance methods and situations in which they might be appropriate to address a wide variety of IVD-related public health questions:

i. Detailed review of complaint history and scientific literature. Example: compilation and comparison of the manufacturer's complaint files and published literature to verify frequency of reported adverse events.
ii. Non-clinical testing of the IVD. Example: analysis of IVDs explanted from animal models to assess long-term effects of the body on implant materials.
iii. Telephone or mail follow-up of a defined patient sample. Example: evaluation of the effectiveness of user training for a home-use IVD previously used only in the hospital setting; outcomes easily and reliably reportable directly by patient.
iv. Use of secondary data sets, external registries, internal registries, or tracking systems. Example: analysis of patient outcomes or device usage. (In these instances, it is important to ensure that variables of interest are included in the data set/registry).
v. Case-control study of patients implanted with or using IVDs. Example: comparison of cases and controls to quantify magnitude of risk posed by device exposure.
vi. Consecutive enrolment studies. Example: assessment of outcomes following device exposure, to assess the frequency of problems based on clinical follow-up of patients.
vii. Cross-sectional studies (multiple cohorts). Example: assessment of IVD safety and/or effectiveness at designated time intervals after the initiation of the post marketing surveillance plan.
viii. Non-randomized controlled cohort studies. Example: analysis of risks and benefits associated with each of several IVDs used to treat same disease or condition.
ix. Randomized controlled trials. Example: evaluate the risk/benefit relationship for a sub-population using a device

4.3.1 Vigilance Inspections and Audits

Manufacturers must make sure that the tracking program works. Manufacturers must perform audits at 6 month intervals for the first 3 years after receiving tracking orders, and then annually after 3 years. Audits should verify that the tracking method actually works and that the information collected is accurate so that, in the event of a recall, the right persons are notified in a timely fashion.

A recognized statistical sampling plan should be used. Audits may be conducted through on-site visits or through some other effective way of communication with the distributors, professionals, and patients.

LMHRA may review manufacturer's tracking program to ensure that the tracking method actually tracks a specified device to the end user.

4.3.2 Elements to be Included in the PMS Plan

The following minimum information should be included in the post marketing plan which is to be submitted to LMHRA for review;

i. Background (e.g., regulatory history, brief description of device, indications for use)
ii. Purpose of study
iii. Study objectives and hypotheses
iv. Study design
v. Study population (including subject inclusion and exclusion criteria and definition and source of comparator group)
vi. Sample size calculation (statistically justified and based on study hypothesis)
vii. Primary and secondary endpoints (including definitions for study endpoints, success criteria, list of expected adverse events/complications, standard operating procedures for a determination of relatedness with the device and/or the procedure)
viii. Length of follow-up, follow-up schedule, description of baseline and follow-up assessments
ix. Description of data collection procedures (including recruitment plans, enrolment targets, plans to minimize losses to follow-up, follow-up rate targets, quality assurance, and control)
x. Statistical analysis
xi. Data collection forms, informed consent forms
xii. Reporting requirements for interim and final reports
xiii. Study milestones/timeline elements, including:
    - Expected date of study initiation
    - Expected monthly number of study sites with IRB approvals
    - Expected date of initiation of subject enrollment
    - Expected number of subjects enrolled per month
    - Expected date for subject enrollment completion
    - Expected date to complete follow-up of all study participants

If applicable, information related to intermediate milestones (e.g., evaluation of surrogate endpoints in a study that also measures clinical benefits).

4.3.3 Public Disclosure of PMS Study

Most of the information in the PMS plan is subject to release. LMHRA will protect trade secret and commercial confidential information as well as any personal identifier information for patients. The overall status of the surveillance, along with a brief description of the plan might be posted to the public.

4.3.4 Post-Market Reports

A Final Post-Market Surveillance Study Report should be written and submitted once the post market surveillance study is completed or terminated. The Final Post-Market Surveillance Study Report should be submitted no later than three months after study completion. Once the plan has been approved, you will submit interim reports as specified in the approved plan. Subsequent changes to the plan after its approval are submitted and reviewed as post market surveillance study supplements.

Interim Post-Market Surveillance Study Status Report every 6 months for the first 2 years of the study and annually, thereafter, from the date of the study plan approval or other

negotiated starting date. It is recommended to continue this reporting schedule until the Final Post-Market Surveillance Study Report is submitted. The Final Post-Market Surveillance Study Report describes the study methodology and results.

Depending on the conclusion of the results of the study, LMHRA will send a letter to the manufacturer reflecting the decision.

However, if the results of the post market surveillance raise new issues or questions, additional actions may be required. For example LMHRA might:

i. Request changes to the labeling of the IVD to reflect additional information learned from the post market surveillance;
ii. Issue new post market surveillance order to address new issues; or
iii. Consider administrative or regulatory actions if necessary to protect the public health.

The Post-Market Surveillance Study Reports (interim and final) shall include the following minimum information:

A. General Information

i. Post-market surveillance study application number;
ii. Sponsor name and contact information (name of the individual or entity holding the approved PMA), Date of post market surveillance study plan approval and, if applicable, date(s) of approval of plan revision(s);
iii. IVD trade name(s); and
iv. IVD model number(s)

B. Submission Information

Date of submission; Data included in the submission (choose one: Clinical study, Laboratory study, Animal study); Type of submission (Choose one: Interim Post-Marketing Surveillance Report, Final Post-Marketing Surveillance Study Report, Response to LMHRA correspondence for a deficient report or another reason – specify)

C. Study Information

- Purpose of the study, including study goals, objectives, and primary and secondary study end points;
- Patient population being studied, including specific illness or condition, whether the study targets sub-populations (e.g. pediatric, geriatric), total number of subjects to be studied, schedule of subject follow-up
- Begin and end dates of period covered by the report;
- Date of database closure for the report (should not exceed three months prior to the deadline for submission of report);
- Summary of study progress milestones/timeline elements: Date of approval of the study plan; Number of IRB approvals; Number of clinical sites enrolled; Number of clinical sites at which the study was initiated; completion date for enrollment of clinical sites; Number of subjects enrolled (if applicable, this information should be presented for the entire subject population and for each subgroup); Subject accrual start date and subject accrual completion date; Study targets: percentage of subjects reaching each designated study phase; Comparison of target versus actual enrollment and follow-up; Anticipated study completion date (i.e., complete follow-up of all study participants);
- If applicable, a rationale for not meeting the study milestones/timeline specified in the study plan and a revised study timeline;

- Subject accountability data stratified by each follow-up time point for the entire population and for each subgroup. To limit the potential bias in safety and effectiveness data, every effort should be made to reduce the number of subjects lost-to-follow-up, if applicable, an explanation for: Subjects lost to follow-up, as well as any measure to minimize such future events.

- Subject and physician-initiated discontinuations - Any deaths, including reports from post-mortem examinations;
- Summary of safety and/or effectiveness data and an interpretation of study results to date;
- Submission of three copies (one electronic and two paper copies) of all post-marketing surveillance study submissions to LMHRA HQ. "An electronic copy is an exact duplicate of a paper submission, created and submitted on a CD or DVD, accompanied by a copy of the signed cover letter and the complete original paper submission. An electronic copy is not an electronic submission."

4.4 Incidents Which The Manufacturers Should Report

The following examples are for illustrative purposes only, and are for the guidance to the manufacturers to determine whether a report should be sent to LMHRA. The examples are intended to show that there is a considerable judgmental element in the decision on whether to report.

i. A patient dies after the use of a defibrillator and there is an indication of a problem with the defibrillator.

ii. A patient receives a burn during the use (in accordance with the manufacturer's instructions) of surgical diathermy. If the burn is significant, this should be reported as such a serious deterioration in state of health is not normally expected.

iii. An infusion pump stops, due to a malfunction of the pump, but fails to give an appropriate alarm; there is no patient injury. This should be reported since in a different situation it could have caused a serious deterioration in state of health.

iv. An infusion pump delivers the wrong dose because of an incompatibility between the pump and the infusion set used. If the combination of pump and set used was in accordance with the instructions for use for either pump or set.

v. An aortic balloon catheter leaked because of inappropriate handling of the device in use, causing a situation which was potentially dangerous to the patient. It is believed that the inappropriate handling was due to inadequacies in the labeling.

vi. A catheter fractured during insertion, with no suggestion of inappropriate handling. The fracture occurred in such a position that the broken part could easily be withdrawn. However, this was clearly a fortunate circumstance as if the catheter had fractured in a slightly different position then surgical intervention would have been necessary to retrieve the broken end.

vii. Glass particles are found in a contact lens vial.

viii. A defect is discovered in one (hitherto unopened) sample of a batch (lot) of a contact lens disinfecting agent that could lead to incidence of microbial keratitis in some patients. The manufacturer institutes a FSCA of this batch.

ix. Loss of sensing after a pacemaker has reached end of life. Elective replacement indicator did not show up in due time, although it should have according to device specification.

x. On an X-ray vascular system during patient examination, the C arm had uncontrolled motion. The patient was hit by the image intensifier and his nose was broken. The system was installed, maintained, and used according to manufacturer's instructions.

xi. The premature revision of an orthopedic implant is required due to loosening. Although no cause is yet determined, this incident should be reported.

xii. The manufacturer of a pacemaker has identified a software bug in a pacemaker that has been placed on the market. The initial risk assessment identified the risk of a serious deterioration in state of health as remote. Subsequent failure results and the new risk assessment carried out by the manufacturer indicate that the likelihood of occurrence of a serious deterioration in state of health is not remote.

xiii. Fatigue testing performed on a commercialized heart valve bio-prosthesis demonstrates premature failure, which resulted in a risk to public health.

xiv. Manufacturer provides insufficient details on cleaning methods for reusable surgical instruments used in brain surgery, despite obvious risk of transmission of CD.

xv. A batch of out-of-specification blood glucose test strips is released by manufacturer. A patient uses the strips according to the manufacturer's instructions, but the readings provide incorrect values leading to incorrect insulin dosage, resulting in hypoglycemic shock and hospitalization.

xvi. A customer reports a wrong assignment of analytical results to patient codes by an automated analyzer. An evaluation could reproduce the effect and indicated that under specific conditions a data mismatch could occur. Due to the data mismatch a patient suffered from wrong treatment.

xvii. During maintenance of a self-testing analyzer for patients it was detected that a screw which places the heating unit of the analyzer in exact position had come loose. Due to this fact, it may happen that the heating unit leaves its position and the measurement is performed under non exact temperature, which would lead to wrong results.

xviii. During stability testing of a CRP test the internal quality control found that after several months of storage false increased values are measured with neonatal samples. This could lead to the wrong diagnosis of the existence of an inflammatory illness and to a wrong treatment of the patient.

CHAPTER 5

PMS INSPECTORS AND INSPECTIONS

5.1 Inspectors

5.1.1 **Inspector Qualification**: Inspectors should normally be pharmacists who have working experience in community and/or hospital pharmacy. Where persons other than pharmacists are employed as inspectors, they should be adequately experienced in medicines or related products control affairs. Inspectors should be suitably trained in inspectorate functions. They may also be part-time inspectors with specialist knowledge as part of inspection teams.

5.1.2 **Attributes of an Inspector**: An inspector should possess the following attributes:

- Good knowledge of pharmacy, laws and regulations to be enforced.
- Good command of technical terms and excellent communication skills.
- Awareness of the probable methods of using forged or false documents for transactions in medicines preparations and skills in determining the genuineness of documents presented for examination.
- Maturity, honesty and integrity.
- Responsible conduct which commands respect.
- Willingness to accept challenges.
- Ability to organize their own work with minimum supervision.
- Ability to assess facts quickly and take rational and sound decisions without delay.
- Ability to assess character and honesty of persons being interviewed.

- Good public relations image with key personnel/pharmacists in charge of premises while remaining firm, fair and resolute.
- Ability to hold discussion with company management at the completion of inspection.
- Ability to motivate other inspectors.
- Commitment to hard work and long hours.
- Ethical approach to any potential conflict of interest.
- Have good eye sight.
- Always be presentable and have a pleasant character.
- Ability to adopt new work and assignment.
- Be punctual.

5.1.3 Organizational Aspects:

All inspectors are to be authorized by the LMHRA. The following aspects should be ensured:

- A job description which describes the duties of the inspector.
- Proper reporting procedures; inspectors should report to the Managing Director of LMHRA through their Inspector General/Head of Inspectorate.
- Uniformity of approach.
    - Regular meetings of inspectors, in which experiences on the job are exchanged, will help promote a uniform approach to inspection as well as enhance the performance of the inspectors.
    - Inspectors should work according to a work plan and to standard operating procedures (SOPs)
    - Inspection reports should be in four parts: (i) date of inspection and general information on the establishment inspected; (ii) description of the inspection activities undertaken, including analytical data of sample taken; (iii) observations and recommendations; (iv) Conclusions.
    - Inspectors should submit monthly reports of work to the Managing Director of LMHRA.

5.1.4 Code of Conduct for Inspectors During Inspection

- Exercise confidentiality: do not reveal to a third party findings/observations regarding your work.
- Make accurate reports of the facts observed.
- Be courteous and demonstrate poise and competence in your work.
- Refrain from expressing personal views; such remarks or opinions may be interpreted as official.
- Do not lose temper when abused or accused.
- Do not miss a single object, correspondence, record, accounts book, chit, rough book, or other relevant papers, which may prove to be material evidence in establishing conduct, transactions, circumstances and so on of the establishment being inspected.
- Do not fail to mention or record all items seized. Full details and descriptions of the incriminating articles or circumstances for which a charge will be opened (in case of intention to institute legal charges) should be recorded with witnesses present and signatures of responsible persons should be on the seizure document.

5.1.5 Independency

Inspectors should never depend on the hospitality of the facility to be inspected; for example: inspection costs, transport, etc.

5.1.6 Reference/Information Sources

- When inspecting establishments, the inspector will use the appropriate references.
- The method of inspection will be laid down in an SOP which also contains the requirements for a specific type of establishment. When sampling is part of the inspection, the SOPs will contain guidance for the inspector.
- The reference/ information sources to be used by inspectors should include:
  - LMHRA Act, 2010
  - Guideline on PMS of IVD, 2018
  - Good Storage Practice (GSP)
  - Good Distribution Practice (GDP)
  - Good Pharmacy Practice (GPP)
  - Codes of professional ethics
  - Available guidelines on labeling, packaging, registration and importation
  - Available data on registration/ imports/exports/controlled drugs
  - Inspection checklists.

5.2 Inspection

5.2.1 Types of Inspection

There are five types of inspections: (i) Comprehensive/Routine (ii) Concise (iii) Follow-up (iv) Special (v) Investigative

5.2.1.1 Comprehensive/Routine Inspection

It is generally full inspection of: (i) all applicable components of applicable regulatory requirements and good practices and licensing of premises; or (ii) new premise; or (iii) existing premise for renewal of license to operate; or (iv) for an establishment that has important changes in its key personnel, equipment or changed to new premises; or (v) has not been inspected for a long time; or (vi) has a history of non-compliance.

The inspection may be announced for a new premise, but can be unannounced for established ones.

5.2.1.2 Concise Inspection

It is generally for establishments that have previously been routinely inspected with a view to assessing a limited number of standards of applicable regulatory requirements and good practices selected as indicators of overall performance and identification of significant changes which has been introduced since last inspection. The outcome of the inspection helps in the proper assessment of the establishment.

The inspection can be announced or unannounced.

5.2.1.3 Follow-Up Inspection (reassessment or re-inspection)

- It is made to monitor corrective measures that have been undertaken following advice and notice given during a previous inspection.
- Where a time limit was given for undertaking corrective measures depending on the deficiencies and work to be undertaken, normally restricted to specific requirements.
- The inspection should be unannounced.

5.2.1.4 Special Inspection

- It is conducted to assess the performance of (i) a new establishment whose scope of operations was previously unknown; or (ii) complain of product defect; or (iii) report of adverse drug reactions; or (iv) a complaint of product defect; or (v) report of adverse drug reactions.
- It can also be conducted to gather specific information on a product, group of related products or to investigate specific operations such as reconstitution, packaging or labeling.
- It can be done in order to advice medicines importers, wholesalers, retailers, storekeepers and dispensers on regulatory requirements.
- The inspection should be unannounced.

5.2.1.5 Investigative Inspection

- It is conducted to verify complaints received about non-compliance with standards of good and/or professional practice.
- The inspection should be unannounced.

5.2.2 Establishments to be Inspected

- Site visits may include any premise or facility or process involved in purchasing, storing, distributing and/or packaging & labeling of in-vitro diagnostics.
- Areas to be inspected include Ports of entry (POEs) - Sea, Air and Land; Wholesalers, warehouses, Central Medical Store, Regional Medical Stores; Pharmaceutical stores at Hospitals and Health Centers, public and private; Pharmacies, Drugstore outlets, Private or NGO Clinic Pharmacies
- Any other premise that stores, distribute, dispense or sells medicines or related products.

5.2.3 Processes to be Inspected

- Stock and stock management
- Temperature and humidity monitoring
- Purchasing and sales functions
- Transportation arrangements
- Staffing and personnel performance
- License status
- For Importer: IVD products accompanied by import documents such as bill of landing, export authorization, product license and batch certificate;
- Imported IVDs are in original packs, except for those imported in bulk for repackaging
- Retail and hospital pharmacy

5.2.4 The Inspection Process

- During an inspection, the inspectors should identify themselves as authorized inspectors.
- The inspection team will: (i) interview relevant personnel; (ii) review documents; (iii) conduct site visits.
- The inspection team may ask for additional documentation and samples for testing during the inspection. They may also change the focus of the inspection if they suspect serious non-compliance.

- If any sample is taken during inspection for further testing, a receipt for the sample should be provided to the person in-charge of the facility.
- Upon completion of inspection, the inspector should conduct an exit meeting to provide feedback and to discuss the findings with facility staff. The inspector may agree timelines for corrective actions.
- Grading of inspection findings: Deficiencies found during inspections are graded at 3 levels; namely: (i) ***Critical deficiency*** (any departure from regulatory requirements or good practices that result in a significant risk to patients.) This includes an activity which increases the risk of substandard or falsified IVDs reaching patients. (ii) ***Major deficiency*** (a non-critical deficiency which indicates a serious deviation from regulatory requirements or good practices or from the terms of the manufacturer or wholesale license that might result in a risk to patients and has or may produce a product that does not comply with its marketing authorization; (iii) ***Minor deficiency*** (cannot be classified as either critical or major or there is not enough information to classify it as critical or major but which indicates a departure from applicable
- After the inspection there must be an exit meeting, at which time the inspectorate will provide a post inspection letter usually within two weeks confirming any deficiencies found.
- The inspector will expect a written confirmation of the proposed corrective actions and dates for when these actions will be completed.
- The inspector will review the response and if he or she accepts it, the inspectorate will conduct a follow-up inspection and/or provide a written feedback.
- If the compliance to the inspection findings is poor, regulatory actions may be taken.

5.2.5 Preparation at the Establishment for Inspections

- During an inspection, the inspectors should identify themselves as authorized.
- There should be a procedure in place for inspections. This procedure should include instructions for the staff how to receive the inspectors, which senior staff members should be notified, and what arrangements should be made, such as workspace for the inspectors, ready availability of documents and records, and providing access to sites.

CHAPTER 6

RECALL OF IN-VITRO DIAGNOSTICS

6.1 Notification/Initiation of a Recall

6.1.1 A recall can be initiated as a result of reports or complaints on quality, safety or efficacy of an IVD referred to the MAH, manufacturer/importer, distributor or LMHRA from various sources such as manufacturers, wholesalers, retailers and hospital pharmacies, research institutes, medical practitioners, patients, foreign regulatory authorities and the World Health Organization (WHO).

6.1.2 A report may relate to an adverse drug reaction to a particular batch(es) of IVD(s), product quality deficiency, technical complaints experienced with regard to the printed packaging material, contamination, mislabeling, substandard or falsified product including adulterated IVD, or faulty or non-performing IVD.

6.1.3 A recall might also be initiated as a result of analysis and testing of samples by the manufacturers or LMHRA. Recall of IVDs manufactured outside of Liberia might be initiated by the LMHRA or foreign regulatory authorities, or from information received directly from such authorities.

6.1.4 It is imperative that before or upon initiating a recall, the applicant immediately (within 24 hours) on becoming aware of a problem, notifies the LMHRA of the potential recall in writing by email. Therefore it is advisable that no recall, regardless of the level, should be undertaken without consultation with the LMHRA and without agreement on the recall strategy.

6.1.5 However, in case of a potential significant health hazard to patients, during the weekend/public holidays the MAH, manufacturer/importer or distributor may within 24 hours disseminate information on the recall. This includes precautionary measures to quarantine stock pending the initiation of the recall.

6.1.6 The MAH, manufacturer/importer or distributor shall not wait to notify the LMHRA until ALL applicable information is prepared and assembled. This immediate notification is

necessary to allow the LMHRA to review and comment on the written notification and to offer guidance and assistance in the recall process.

6.2 Information Required for the Assessment of a Recall

6.2.1 Each recall is a unique exercise. There are a number of factors common to all recalls that need to be considered in tailoring an appropriate recall strategy. These include the nature of the deficiency in the product, the incidence of complaints, the potential danger to consumers and public safety, distribution networks, recovery procedures, resources for corrective action appropriate to the situation and availability of alternative products.

6.2.2 The MAH, manufacturer/importer or distributor should gather all relevant information on the recall, which includes the product, its distribution channels, and action proposed.

6.2.3 When the need for recall has been established, additional information is required so that an appropriate recall strategy may be devised. A summary of the information required is provided in Section 6.2.8.

6.2.4 The MAH, manufacturer/importer or distributor should make available to the LMHRA all the relevant information regarding the recall on the Recall Information Form. The information required may be included in the form but not limited to it only.

6.2.5 In determining the recall strategy, the MAH, manufacturer/importer or distributor should consider the factors which may affect the duration of the recall action and should inform the LMHRA.

6.2.6 When the required information is available, the appropriate strategy should be proposed to the LMHRA. The proposed recall strategy should be agreed by the LMHRA before implementation (see Section 6.1.4). The actual implementation of the recall includes use of the basic steps which are summarized in Appendix 1 and these will be common to all strategies.

6.2.7 The recall should be completed by the date as agreed with the LMHRA.

6.2.8 In the recall strategy, the MAH, manufacturer/importer or distributor should mention the following:

- Indicate the proposed level in the distribution chain to which the recall is extending (see type of recall below), if the recall only extends to the wholesale level, the rationale of not recalling to retail level should be explained;
- In case of consumer level recall, additional information should be mentioned:
    - Indicate the location of recall spots for consumers (preferably not less than 7 recall spots covering the seven health regions), their operation time and duration as appropriate;
    - Indicate the hotline number(s) for enquiry and the corresponding operating hours;
- Indicate the method of recall notification (e.g. mail, phone, facsimile, email);
- Indicate how the message of recall will be delivered to customers e.g. press release or recall letters, etc;
- If the MAH, manufacturer/importer or distributor has a website, it should be considered posting the recall notification on it as an additional method of recall notification;
- Report on what have the customers been instructed to do with the recalled product;
- If products are to be returned, explain the mechanism of the process;
- Explain if the recall will create a market shortage that will impact on the consumer;

- Provide a proposed disposal plan of the recalled products, whether they would be destroyed, reconditioned or returned to manufacturer;
- Inform LMHRA before product destruction, the proposed method of destruction would be reviewed and LMHRA to witness the destruction exercise. For details on destruction refer to the LMHRA guideline for Safe Disposal of Medicines and Related Products.

6.3 Classification and Types (Levels) of Recalls

6.3.1 Recalls are classified in two ways: according to ***the level of health hazard involved*** (risk to the patient) and ***the type which denotes the depth or extent to which the product should be recalled from the distribution chain***, e.g. Class I, Type C recall, etc.

6.3.2 Class I or Class II recalls are considered to be urgent safety-related recalls and must be reported to the LMHRA immediately for further evaluation and investigation.

6.3.3 Class III recalls are considered to be non-safety-related recalls.

6.3.4 Each recall is a unique exercise and there may be occasions when the scope of a recall can be narrowed to particular customer groups. Expert advice might be sought where the nature of the hazard or its significance is not clear.

6.3.5 Decisions on the Class and Type (Level) of a recall to be initiated are a matter of the LMHRA in consultation with the MAH, manufacturer/importer or distributor and shall be based on the evidence and/or expert opinion of the LMHRA.

6.3.6 In determining the recall type (level or depth), the principal factors to be considered are the significance of the hazard (if any), the channels by which the IVDs have been distributed, and the level to which distribution has taken place.

6.3.7 There are three types of recalls, A, B and C.

Type A: A type A recall is designed to reach all suppliers of IVDs (all distribution points) i.e. hospitals, health centers, clinics (public as well as private), wholesalers, central medical store, county depots, retailers and individual customers or patients through press release (radio, television, print media). Action: Recall letter to all distribution points plus press release.

***Type B*:** A type B recall is designed to reach hospitals, health centers, clinics (public as well as private), wholesalers, central medical store (CMS), county depots, and retailers. Action: Recall letter to all distribution points.

Type C: A type C recall is designed to reach wholesale level, CMS, county depots, hospitals and clinics which can be reached by means of a representative calling on. **Action**: Recall letters to representatives at distribution points where the medicines or related product have been distributed.

6.4 Recall Letters and Press Release

6.4.1 Recall letters should include factual statements of the reasons for the recall of the IVD, together with special details that will allow the product to be easily identified.

6.4.2 The text of the recall letter is to be sent to the LMHRA for approval before being dispatched.

6.4.3 The approved recall letter may be sent within 24 hours of receiving approval and a signed copy of the approved recall letter is to be sent to the LMHRA.

6.4.4 If safety to the public is involved and distribution is limited, the MAH, manufacturer/importer or distributor may contact the clients of the information listed below by telephone and followed by a recall letter.

6.4.5 Recall communication from the MAH, manufacturer/importer or distributor to the distribution chain should be written in accordance with the following:

- Should be on the company's letterhead and signed by the Responsible Pharmacist or authorized person.
- The subject of the letter should indicate that it is an "Urgent IVD Recall"
- The heading should also indicate the classification and type of the recall.
- Name of the IVD and manufacturer and where applicable the registration number, pack size, batch number(s), expiry date and any other relevant information necessary to allow absolute identification.
- Nature of the defect (be brief and to the point).
- Urgency of the action.
- Reason for the recall.
- Indication of a health risk (this should also state exactly what the product may do if taken, i.e. adverse reactions). It should be made clear that further distribution or use of the product should cease immediately.
- Provide specific information on what should be done in respect of the recalled medicine or related product and method of recovery or product correction, which will be used.
- Contact telephone number and email addresses.
- There should be a request for a written response to confirm receipt and understanding of the action to be taken.
- Where necessary a follow-up communication shall be sent to those who failed to respond to the initial recall communication.
- Where recalled stock has been distributed to a limited number of facilities and the recall letter is not to be sent to all facilities, the letter should include the following: If any of the recalled stock could have been transferred from one facility to another, please let the latter know or alternatively inform us so that we can make contacts.

6.4.6 Rapid alert to public is usually reserved for hazards classified as Class I, and where appropriate Class II, or situation where other means for controlling the hazard appear inadequate. Rapid alert to public may be issued through appropriate channels which may include press release.

6.4.7 In the case of a recall where a press release is indicated, jointly the MAH, manufacturer/importer or distributor and the LMHRA make the text of the press release.

6.4.8 The press release should contain sufficient and relevant details to uniquely define the product, together with a clear outline of the problem (without causing unnecessary alarm) and must state the appropriate response by the consumer/client.

6.4.9 The media release will be issued by the MAH, manufacturer/importer or distributor and an access telephone number of the MAH, manufacturer/importer or distributor should be given for further information.

6.4.10 In the event that the MAH, manufacturer/importer or distributor refuses to do a press release the LMHRA will do the release.

6.4.11 The choice of the media should be done in consultation with the LMHRA and consideration should be given to the need to inform the public in the major local languages.

6.4.12 The LMHRA will publish the recall details in the form of a notice on the LMHRA website.

6.5 Responsibilities of MAH, Manufacturer/Importer or Distributor

6.5.1 MAH, manufacturer/importer or distributor are responsible to maintain records and establish procedures which will facilitate a recall and taking the prime responsibility for implementing a recall where it is necessary including the costs.

6.5.2 The complete records pertaining to distribution should be retained for one year after the expiry date of each batch

6.5.3 The MAH, manufacturer/importer or distributor as well as the LMHRA should retain records of problem reports received about each product. Problem reports should be evaluated by competent personnel and appropriate action taken. The evaluation of each report and the action taken should be shown in the records.

6.5.4 Recalled medicines should be segregated during transit and clearly labeled as recalled products. Where segregation in transit is not possible, such goods must be securely packaged, clearly labeled, and be accompanied by appropriate documentation.

6.5.5 The particular storage conditions applicable to medicines which are subject to recall should be maintained during storage and transit until such time as a decision has been made regarding the fate of the product in question

6.6 Post Recall Procedures

6.6.1 Within two weeks of the recall having been instituted the LMHRA shall be furnished by the MAH, manufacturer/importer or distributor with a final report on the effectiveness of the recall on the Recall Report Form.

6.6.2 The report should include but not limited to the following:

- The corrective actions proposed/implemented and the dates of implementation to prevent a recurrence of the problem.
- The extent of distribution of the relevant batch in Liberia as well as outside.
- The success of the recall i.e. quantity of stock returned, corrected, outstanding, etc.
- Confirmation, where applicable, (e.g. wholesalers, health facilities, retailers customers, other international regulatory authorities) that the recall letter was received.
- The method of disposal of the recalled IVDs. Details on the investigation into the cause of the defect.

6.6.3 The MAH, manufacturer/importer or distributor should report to the LMHRA with relevant explanation and obtain its approval if the final report cannot be submitted within two weeks after commencing the recall.

6.6.4 The report establishes the effectiveness of the recall. Unless satisfactory report is received, further recall action may have to be considered.

6.7 Evaluation of the Recall

6.7.1 The evaluation consists of a check on the effectiveness of the recall and an investigation of the reason for the recall as well as the remedial action taken to prevent a recurrence of the problem.

6.7.2 The LMHRA shall evaluate the reports received from the recalling site and an assessment made of the effectiveness of the recall action. In some cases the LMHRA may contact a percentage of customers in the distribution list as a means of assuring the MAH, manufacturer/importer or distributor is carrying out its recall responsibilities.

6.7.3 The MAH, manufacturer/importer or distributor shall identify the root cause of the problem and implement the corrective and preventive actions accordingly.

6.7.4 On completion of a recall or during the process of a recall, the MAH, manufacturer/importer or distributor is requested to provide details of the corrective actions and time lines proposed to prevent a recurrence of the problem which gave rise to the recall.

6.7.5 Where the nature of the problem and appropriate corrective actions are not apparent, investigation and in some cases Pharmacovigilance and/or Good Manufacturing Practice inspections or audits may be necessary.

6.7.6 Apparent follow-up actions will be taken by the LMHRA. This might include a review of the medicine dossier by the LMHRA and any appropriate action instituted by the LMHRA based on the outcome of the review of the applicable dossier.

6.7.7 Once the recall has been handled satisfactory, the LMHRA will determine closure of the recall.

6.7.8 Where a recall is initiated following a report submitted by a foreign regulatory authority, the reporter should be provided with an outline of the results of investigation and a summary of the recall.

6.8 Reinstatement of Supply

6.8.1 The quality of the products shall conform to specific requirements before resuming the supply to public. The MAH, manufacturer/importer or distributor must seek approval from LMHRA before reinstatement of the IVDs previously recalled.

6.8.2 After implementing the remedial action and subsequent manufacturing or importing the new batch of the product, the MAH, manufacturer/importer or distributor shall submit analytical report(s) of the new batch tested to the LMHRA as a proof of product quality that will be evaluated by the LMHRA.

6.8.3 After evaluation the LMHRA will inform the MAH, manufacturer/importer or distributor whether the submitted reports are satisfactory.

6.8.4 The LMHRA may take samples of the first three batches of the product for testing and will inform the MAH, manufacturer/importer or distributor whether the analytical test was satisfactory.

Document History

Summary of Revision	Rationale for Revision
Rev 01	
New Edition	

Annex I

REPUBLIC OF LIBERIA

LIBERIA MEDICINES&HEALTH PRODUCTS REGULATORY AUTHORITY (LMHRA)

P. O. Box 1994 VP Road, Old Road
Oldest Congo Town
1000 Monrovia 10, Liberia

IN-VITRO DIAGNOSTICS ADVERSE EVENT/INCIDENT REPORTING FORM FOR CONSUMERS AND HEALTH FACILITIES

LMHRA Internal Use Only	
Report Number:	Date Received:

1. Device details	
Brand name:	Catalogue Number: Model number:
Is the Device CE marked? Yes ☐ No ☐ Instructions for use provided (where possible please attach a copy)	Instructions for use provided? Yes ☐ No ☐
Manufacturer's Name:	Address:
Name of Supplier:	Address: Telephone:
Current Location of the IVD:	

2. Event/Incident Details	D Incidentate of		
Type of incident (patient-related): ☐ *Death* ☐ *Serious* ☐ *Distress* ☐ *Minor* ☐ *None other*			
Type of incident (Device-related): ☐ Inadequate design ☐ Inaccurate labeling ☐ Malfunction ☐ Deterioration ☐ Others			
Measures taken by user			
Number of patients involved:			
Operator at the time of the event/incident (please choose); (please cross where required)	Laboratory Personnel	Other health care personnel	Other
Have you informed the supplier/Manufacturer?	☐ Yes ☐ No	Date:	

3. Reporter details	
Name of person/facility	

Postal address:	*Street Name:*
City:	*District/Region:*
Telephone/Mobile Phone:	*Fax:*
Email of contact person:	
Date of report:	
Signature;	

Send to:
The Managing Director
Liberia Medicines & Health Products Regulatory Authority (LMHRA)
VP Road, Old Road, Monrovia, Liberia

Annex II

REPUBLIC OF LIBERIA
LIBERIA MEDICINES&HEALTH PRODUCTS REGULATORY AUTHORITY (LMHRA)
P. O. Box 1994 VP Road, Old Road
Oldest Congo Town
1000 Monrovia 10, Liberia

IN-VITRO DIAGNOSTICS ADVERSE EVENT/INCIDENT REPORTING FORM FOR MANUFACTURERS

Note: *Identities of reporter, patient and institution will remain confidential.*

LMHRA Internal Use Only	
Report Number:	Date Received:

1. Administrative Information	
Date of this report:	Reference number assigned by the manufacturer:
Type of Report	☐ Initial report ☐ Follow-up report ☐ Combined initial and final report ☐ Final report
Does the incident represent a serious public health threat? ☐ Yes ☐ No	Please explain:
Name of Supplier:	Address:
2. Manufacturer's information	
Name:	Postal address:
Email:	Physical address:
Phone:	Fax:
Contact person's name:	Postal address:
Email	Physical address:
Phone	Fax:

3. Local Representative Information	
Name*:*	*Postal address*
Phone:	*Physical address*
Fax:	*Email:*
Contact person's name	
Phone:	*Email:*
4. Device details	
Brand Name	*Catalogue number:*
	Model Number:
Manufacturing date:	Serial Number:

Expiry date:	Lot/batch number:
Is the IVD CE marked? ☐ Yes ☐ No	Instructions for use provided? Yes ☐ No ☐ (Please attach a copy where possible)
5. Event/Incident Details	
User facility report reference number (if applicable)	
Manufacturer's awareness date	Date the incident occurred
Incident description narrative	
Number of patients involved	Number of products involved
Current location of the IVD	
Usage of the medical device	☐ Initial use ☐ Re-use of a single user ☐ Re-use of a reusable ☐ Re-served/Refurbished ☐ Problem noted prior use ☐ Other (please specify)

6. Manufacturer's preliminary comments (Initial/Follow-up report)	
Manufacturer's preliminary analysis (Narrative)	
Initial corrective/preventive actions implemented by manufacturer	
Expected date of next report	
7. Results of manufacturer's final investigation (Final report)	
The manufacturer's IVD analysis results	
Remedial action/corrective action/preventive action/Field Safety Corrective Action	
Action taken to prevent further risk to the patient (Narrative)	
Time schedule for the implementation of the identified actions	
Final comments from manufacturer	
Further investigations	
Is the manufacturer aware of similar incidents with this type of IVD with a similar root cause?	☐ Yes ☐ No
8. Conclusion I affirm that the information given above is correct to the best of my knowledge.	

Name:_____ Signature: _____ Date:_____

Send to:
The Managing Director
Liberia Medicines & Health Products Regulatory Authority (LMHRA)
VP Road, Old Road, Monrovia, Liberia

Annex III

REPUBLIC OF LIBERIA

LIBERIA MEDICINES&HEALTH PRODUCTS REGULATORY AUTHORITY (LMHRA)

P. O. Box 1994 VP Road, Old Road
Oldest Congo Town
1000 Monrovia 10, Liberia

IMPORTER/SUPPLIER FORM FOR REPORTING PROBLEMS AND/OR ADVERSE EVENTS ELATED TO IN-VITRO DIAGNOSTICS

Note: *Identities of reporter, patient and institution will remain confidential.*

LMHRA Internal Use Only	
Report Number:	Date Received:

1. Contact details of the reporting company	
Name of company:	Importer/supplier/distributor (Please specify)
Postal address:	Street Name:
City:	District/Region
Tel: Mobile:	Fax:
Name and position of contact person:	Please explain:
Email of contact person:	Address:
2. Product details	
Product/commercial/brand name:	
Catalogue/Model number:	Serial/batch/lot number:
Manufacturing date:	Expiry date:
Name of associated devices/accessories:	Instructions for use version number:
Name of shop where the product was purchased	
Manufacturer name and address:	

3. Event/problem detail	
Event/problem description narrative (explain what went wrong with the product and the observed or likely/probable consequences)	
Date:	*Place of event/problem*
Number of cases involved:	*Are cases from different units involved?* ☐ *Yes* ☐ *No*
Operator at the time of the event/problem (please choose)	☐ *Laboratory personnel* ☐ *Non-Laboratory personnel* ☐ *Others*
Has more than one customer experienced the problem with the product?	

Email:	
4. Device details	
Brand Name	*Catalogue number:*
	Model Number:
Manufacturing date:	Serial Number:
Expiry date:	Lot/batch number:
Is the IVD CE marked? ☐ Yes ☐ No	Instructions for use provided? Yes ☐ No ☐ (Please attach a copy where possible)
5. Event/Incident Details	
User facility report reference number (if applicable)	
Manufacturer's awareness date	Date the incident occurred
Incident description narrative	
Number of patients involved	Number of products involved
Current location of the IVD	
Usage of the medical device	☐ Initial use ☐ Re-use of a single user ☐ Re-use of a reusable ☐ Re-served/Refurbished ☐ Problem noted prior use ☐ Other (please specify)

6. Manufacturer's preliminary comments (Initial/Follow-up report)	
Manufacturer's preliminary analysis (Narrative)	
Initial corrective/preventive actions implemented by manufacturer	
Expected date of next report	
7. Results of manufacturer's final investigation (Final report)	
The manufacturer's IVD analysis results	
Remedial action/corrective action/preventive action/Field Safety Corrective Action	
Action taken to prevent further risk to the patient (Narrative)	
Time schedule for the implementation of the identified actions	

Final comments from manufacturer	
Further investigations	
Is the manufacturer aware of similar incidents with this type of IVD with a similar root cause?	☐ Yes ☐ No
8. Conclusion I affirm that the information given above is correct to the best of my knowledge. Name:_____ Signature: _____ Date:_____	

Send to:
The Managing Director
Liberia Medicines & Health Products Regulatory Authority (LMHRA)
VP Road, Old Road, Monrovia, Liberia