PROPOSAL FOR THE DEVELOPMENT OF PHARAMCOVIGILANCE REGIONAL CENTRE OF REGULATORY EXCELLENCE (RCORE) MANUAL

Food and Drugs Authority

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1.0 Introduction

A Regional Centre of Regulatory Excellence (RCORE) is a designated institution or partnership of institutions with specific regulatory science expertise as well as training capabilities. This initiative was established by the New Partnership for Africa's Development (NEPAD) Agency's African Medicines Regulatory Harmonization (AMRH) programme to fill an existing gap and address the regulatory capacity challenges experienced by National Medicines Regulatory Authorities (NMRAs) and the pharmaceutical industry in Africa.[1] The NEPAD Agency through its AMRH programme has designated 11 RECORE in eight different function [2] listed below.

- Pharmacovigilance
- Medicine Evaluation and Registration
- Registration and Evaluation and Clinical Trials Oversight
- Training in Core Regulatory Functions
- Clinical Trials Oversight
- Quality Assurance and Quality Control of Medicines
- Medicines Registration and Evaluation, Quality Assurance/ Quality Control and Clinical Trials Oversight
- Licensing of Manufacture, Import, Export, Distribution and Inspection and Surveillance of Manufactures, Importers, wholesalers and Dispensers of Medicines

1.1 Functions of an RCORE

Following their designation, RCOREs are expected to produce regulatory workforce in Africa by performing the following roles.

- Providing academic and technical training in regulatory science applicable to the different regulatory functions and managerial aspects
- Increase regulatory workforce to facilitate performance of regulator function in country
- Contribute to skills enhancement through hands-on training, twinning and exchange programmes among NMRAs
- Provide a platform for regulators and researchers to continually share ideas, knowledge and experiences over the years in the aim of improving their activities.
- Encourage practical training through placement in pharmaceutical industry.
- Execute operational research to pilot-test innovations and interventions to inform best practices for scale up to other National Medicines Regulatory Agencies.

The Food and Drugs Authority (FDA) in addition to being an RCORE for Registration and Evaluation and Clinical Trials Oversight, is one of only two institutions (Pharmacy and Poisons Board, Kenya)

[1] file:///C:/Users/hp/Downloads/What%20is%20an%20RCORE.pdf

[2] https://www.nepad.org/publication/regional-centres-of-regulatory-excellence-rcores

that is an RCORE for pharmacovigilance. The FDA's RCORE for pharmacovigilance is in collaboration with the Centre for Advocacy and Training in Pharmacovigilance, University of Ghana Medical School. [3]

2.0 FDA's experience in providing pharmacovigilance capacity strengthening

The FDA in 2001 was designated by the WHO as the National Pharmacovigilance Centre under the WHO Programme for International Drug Monitoring. In 2019, the FDA was assessed as Maturity Level 3 for six regulatory functions using the Global Benchmarking Tool with the Pharmacovigilance (PV) function attaining Maturity Level 4. This meant that the PV function of the FDA is operating at advanced level of performance with continuous improvement needed.

The FDA due to it extensive experience in pharmacovigilance has supported through training, regulatory twinning and exchange programmes contributed to strengthening of the PV capacities of several countries in sub-Saharan Africa including Ethiopia, Botswana, Liberia and Sierra Leone. The FDA has also collaborated with institutions including Netherlands Pharmacovigilance Centre (through PROFORMA and PAVIA initiatives) and Paul Ehrlich Institute and provided PV training for countries including Nigeria, Tanzania, The Gambia and Eswatini.

Ghana is currently one of the few countries in the world providing training for Qualified Persons for Pharmacovigilance (QPPV)The two-weeks training programme is organized in collaboration with the African Collaborating Centre for Pharmacovigilance to equip QPPVs with to knowledge and skills to understand all relevant aspects of pharmacovigilance required in order to take on the role of QPPV, understand how to monitor the performance and effectiveness of the pharmacovigilance system and its quality system; and be able to set up and run an efficient pharmacovigilance system in Ghana and be able to compile regulatory documents (PSUR/ PBRER and RMPs) as per FDA's requirements.[4] . Participants from Nigeria and Uganda have participated in the training. The FDA in 2022 organized onsite QPPV training for the Liberia Medicines and Health Products Regulatory Agency.

The FDA over the years have supported countries in strengthening PV in the underlisted areas.

- Establishment of PV in Public Health programmes
- Strengthening spontaneous reporting systems
- Implementation of active monitoring systems
- Management of safety data
- Review and management of regulatory documents e.g. Periodic Safety Update Reports (PSUR/PBRERs) and Risk Management Plans
- Monitoring of implementation of Risk Minimization Measures

[3] RCOREs Institution | AUDA-NEPAD
[4] ur70_web.pdf (who-umc.org)

- Implementing Qualified Persons for Pharmacovigilance (QPPV) concept
- Good Pharmacovigilance Practice Inspections

3.0 Problem Statement

There is lack of the much-needed Pv capacity on the continent as Pv is relatively a new science in Africa with only sixteen countries on the continent joining the WHO Programme for International Drug Monitoring after the year 2010.[5] There is therefore a critical need to build capacity on the continent due to the introduction of new vaccines and drugs, including those introduced under emergency use authorization and those which are specific for disease in Africa. The COVID-19 pandemic has highlighted this need for improved Pv expertise on the continent. African countries are facing challenges in the monitoring of the safety of COVID-19 vaccines and therapeutics issued emergency use authorization. They are unable to collect and analyse local data for decision making for themselves.

The FDA has an enormous amount of experience in pharmacovigilance and helping to strengthen the PV capacity of countries and is therefore positioned to help improve the situation. However, currently the training manuals for the PV training are in separate modules which does not support a wholistic approach to training.

The FDA has initiated discussion with the School of Pharmacy, University of Health and Allied Sciences (UHAS) for collaboration in the delivery of the Pharmacovigilance RCORE training programme.

4.0 Pharmacovigilance RCORE Programme

The PV RCORE programme will be a four-week intensive programme targeted at the underlisted.

- Healthcare professionals involved in pharmacovigilance
- Pharmaceutical industry persons
- Staff of National Drug Regulatory Agencies
- Post-graduate students in the area of pharmaceutical drug development
- Persons interested in pharmacovigilance

The programme will include theory as well as practical sessions to be facilitated be pharmacovigilance experts from FDA and UHAS.

The proposed RCORE manual will serve as a teaching and reference source. The Manual will be presented in both printed and electronic format for wider distribution.

[5] chrome-extension://dagcmkpagjlhakfdhnbomgmjdpkdklff/enhanced-reader.html?openApp&pdf=https%3A%2F%2Fbpspubs.onlinelibrary.wiley.com%2Fdoi%2Fpdfdirect%2F10.1111%2Fbcp.15193

Table 1 provides the proposed modules to be taught during the RCORE training programme. The detailed content will be developed and reviewed by a team of PV experts and academicians from FDA and UHA.S.

Table 1: Modules in PV RCORE

Week	MODULE	TOPICS
1.	**Module 1: Clinical Trials: Authorization and Monitoring**	• Introduction to drug development, ethics and historical perspectives of clinical trials. • Regulations, laws and legal framework of clinical trials, roles of regulatory authorities and research ethics committees, code of ethics in research conduct, • Scientific integrity in the design, conduct, analysis and reporting of clinical trials, ethical conduct in clinical trials • Principles of Good Clinical practice, Clinical trial monitoring, audits and inspections, Good Manufacturing Practice. **Group Discussion**: Case studies of disasters shaping the clinical research landscape such as the Jesse Gelsinger case
2.	**Module 2: Introduction to Pharmacovigilance and Pharmacovigilance Systems: Global to Africa and The Sub-Region**	• Definitions, history and purpose of pharmacovigilance, the scope of pharmacovigilance • The need for pharmacovigilance: Limitation of pre-market clinical trials, Burden of ADRs, WHO PV strategy, • WHO Programme for International Drug Monitoring: Becoming a member, benefits and obligations of being a member • WHO Pharmacovigilance indicators: WHO Global Benchmarking Tool. • Pharmacovigilance Methods • Developing an ADR reporting culture • Management of ADRs **Group discussion**: Case studies on ADR diagnosis, visit to a public health/health research centre

Week	MODULE	TOPICS
3.	**Module 3: Good Pharmacovigilance Operations**	• Setting up a pharmacovigilance centre • Pharmacovigilance tool kit • Pharmacovigilance Data Management: Standards for reporting ADRs (ICH E2A, E2B and E2D) • Principles and methods for causality assessment for adverse reactions and adverse events following immunization **Practical activities**: Dating mining activities in VigiBase and VigiAccess, Causality assessment activities, visit to National Pharmacovigilance Centre, visit to a hospital PV centre
	Module 4: Management of Individual Case Safety Report (ICSR)	• Searching and analyzing ICSR from pharmacovigilance databases • Principals of Signal management Practical Activity: Signal identification using dataset in VigiBase
4.	**Module 5: Vaccine Pharmacovigilance**	• Important consideration for vaccine pharmacovigilance • Principles of vaccine pharmacovigilance • Adverse Event Following Immunization (AEFI) surveillance cycle Practical Session: Investigation of serious AEFI
	Module 6: Risk Assessment	• Risk management plans (RMPs) and components • Risk Minimization Plans: Importance and evaluation of the need for risk, minimization activities Practical activities: Development of risk minimization plan for an identified safety concern
	Module 7: Crises management and Risk	• Crises Management in Plan • Basics of effective communication in pharmacovigilance

Week	MODULE	TOPICS
	Communication in Pharmacovigilance	• Risk communication: Vaccine Related Event Response plan (VRE) Practical activity: Simulation of vaccine related event and response

5.0 Work plan

The RCORE manual will be developed in 20 working days which will be organized as one five-day residential meeting and one 15 days working and research session. The draft manual will be reviewed in 10 working days session.

5.1 Deliverables

The key deliverable from the project will be a designed RCORE manual for pharmacovigilance.

5.2 Project completion timeline

The expected timeline for completion of activity is 31st December 2022.

6.0 Proposed Budget

The estimated budget for the activity is One hundred and ninety-seven thousand, eight hundred Ghana Cedis only (Ghc **197,800.00**).

7.0 FDA Contact Person

The FDA contact person for all queries / follow up on the project is Dr. Edwin Nkansah, Director for Safety Monitoring and Clinical Trials Directorate.

- **Email: edwin.nkansah@fda.gov.gh**
- **Mobile Number: +233206059700**

Appendix 1: Proposed Budget

No.	Item	Unit Cost	No. of persons	Factor	Total (Ghc)	Total (USD) 1USD : 8 Ghc	Comments
1	Conference facility in Volta Region	380.00	8	5	15,200.00	1,900.00	Conference facility for 8 drafter for 5 days
2	Hotel Accommodation	600.00	8	6	28,800.00	3,600.00	Accommodation for 8 drafters for 6 nights
3	Expert fees for drafters	600.00	8	20	96,000.00	12,000.00	Fees to be paid to the experts engaged in the manual development
4	Expert fees for Manual Reviewer	600.00	5	10	30,000.00	3,750.00	Fees to be paid to the experts engaged in the manual review
5	Proof Reading of Manual	2,000.00	1	1	2,000.00	250.00	Fees to be paid to proofreader of final draft of manual
6	Transportation FDA staff to Volta Region	1,500.00	2	1	3,000.00	375.00	Fuel for two vehicles to convey FDA staff involved in the manual drafting from Accra - Ho - Accra
7	DSA for drivers	400.00	2	6	4,800.00	600.00	Two drivers for the two teams
8	Transportation for 15 non-residential meetings	150.00	8	15	18,000.00	2,250.00	Transportation for 8 drafters during non-residential meeting for drafting of manual
9	**Total**				**197,800.00**	**24,725.00**	

NB: The Pharmacovigilance RCORE Manual is a high-level document targeted at professionals with a minimum qualification of 1st degree. A high level of expertise from both training and practical experience is therefore needed for the development of the manual to be used for capacity building support for Ghana and other countries. The team of experts put together for developing the manual consist of regulators at the rank of Senior Regulatory officer and above, with a minimum of Masters degree and / or with a minimum of 5 years practical experience. The team members from University of Health and Allied Sciences (UHAS) consist of Professors and Senior lecturers.