

How to recognize  
Adverse Drug  
Reaction -PG 8

# Drug Safety Bulletin

ISSUE. NO 3

## Efforts made by TFDA to Promote Reporting of Adverse Drug Reactions



### *Monitoring of Adverse Events Following Immunization (AEFI) in Tanzania*



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# Drug Safety Bulletin

Dear readers,



It is my great pleasure to present to you the 3rd edition of Drug Safety Bulletin. In 2019, TFDA marked 16 years with very important milestone in regulation of quality, safety and efficacy of medicines in Tanzania.

As TFDA grows and matures as a competent regulatory authority in protecting and promoting Tanzanian's health, the Authority reached WHO Maturity Level 3, being the first in Africa to reach the ladder.

In the move to strengthen the safety of medicines, we strive to continuously improve our regulatory systems and envisage making the processes more robust and efficient, sharing as much information as we can with public, through various portals of communication, one of which being this Drug Safety Bulletin.

The process of connecting and engaging with our stakeholders is an ongoing process. Sharing information among healthcare providers concerning drug safety is one of the key components that strengthen rapport for the public interest. We recognise that, health care providers play a significant role in assurance of patient's safety during medication. It is from this point you find that this tool of communication will continue to be a priority for us.

I am delighted to invite you to read thoroughly the drug safety news articles and provide constructive suggestions you may have for improvement in terms of content and design for the future editions of this Bulletin.

It is my hope that you will find this Drug Safety Bulletin useful and interesting. Enjoy reading!

**Adam M. Fimbo**  
Chief Editor.



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*One of Pharmacovigilance stakeholders meeting held at Mbegani Venue, Bagamoyo in the year 2018 to discuss on Pharmacovigilance arena where participants were also informed of the new Pharmacovigilance Regulations highlighting special requirements for different groups*

# Pharmacovigilance Regulations in Tanzania:

## Important tool to bolster reporting of suspected Adverse Drug Reactions

The improving system of Pharmacovigilance in Tanzania is the result of different initiatives developed and implemented by the regulatory authority. Among the strategies is intensification of advocacy activities to educate the Public on reporting of all suspected Adverse Drug Reactions.

Introduction of Pharmacovigilance regulation is a development which brings in mandatory reporting of Adverse Drug Reactions by Marketing

Authorization Holders (MAH), suppliers of medicines, Public Health Programmes, Health Care Workers and consumers.

The Regulations stipulate the requirements for Good Pharmacovigilance Practices among all stakeholders. With the new regulations, manufacturers and other stakeholders are encouraged to employ qualified person for Pharmacovigilance who will assist to oversee, and advise on all issues related to Pharmacovigilance in the country.

Moreover, the regulation highlights that any person who contravene any provision of the Pharmacovigilance Regulation either directly or indirectly assist any other person to do what is prohibited under these Regulations commits an offence and shall be punished in accordance with the provisions under the Act.

The Pharmacovigilance Regulation is available at TFDA website [www.tfda.go.tz](http://www.tfda.go.tz) and all stakeholders are advised to download and obtain the copy.

# Medicines Quality Control in Tanzania

**T**he Tanzania Food and Drugs Authority plays an important role in promoting and protecting the public against hazards associated with the unanticipated use of falsified and substandard medicines. The existence of a significant number of porous borders makes a country vulnerable to the infiltration of falsified and substandard medicines posing a serious danger to the success of public health.

This situation justifies establishment of a comprehensive and sustainable quality control testing system. TFDA initiated and implemented two testing systems which include preliminary testing using GPHF Minilab kits and testing through the implementation of respective compendial monographs at a structured quality control laboratory.

The preliminary testing done by using GPHF minilabs started



Photo: TFDA officers show a Mini lab kits to the Minister for Health, Community Development , Gender, Elderly and Children



Major Laboratory equipment - Chemical testing

in 2002 and was designed specifically as part of import control for antiretroviral, antituberculosis, antimalarial and selected antibiotic agents. To date, TFDA has over 25 minilab kits stationed at the port of entries (PoE), some selected regional hospitals particularly those bordering other countries and TFDA zonal offices.

GPHF minilab kits provide simple test methods for rapid medicine quality verification and substandard/falsified medicines detection from the market compared to structured quality control laboratory.

However, the shortcomings associated with its application require that the two need to be simultaneously implemented.

The TFDA Quality Control Laboratory has been prequalified by the World Health Organization (WHO) in medicine testing since January 2011. The laboratory is adequately equipped in terms of both human resources and modern equipment which enables the implementation of the requirements of compendial and non-compendial monographs.

# Streamlining Health Research Ethics Review Process and Regulatory Framework in Tanzania



**T**anzania is implementing the project called Streamlining Health Research Ethics review process and Regulatory framework in Tanzania (SMERT). This is a two (2) years project started on December, 2017 to November, 2019. It is funded by European-Developing Countries Clinical Trials Partnership (EDCTP), a funding mechanism under the EU's Horizon 2020 research program.

The project is implemented by four (4) Institutions namely; the Tanzania Food and Drugs Authority (TFDA), the National Institute for Medical Research (NIMR) through its Mbeya Medical Research Centre (MMRC), the National Health Research Ethics Committee (NatHREC) Secretariat at NIMR Headquarters, and the Kilimanjaro Clinical Research Institute (KCRI); and the University of St. Andrews (USTAN) in Scotland, UK.

During the implementation, the SMERT Project will build an efficient and effective ethics review and regulatory monitoring system in Tanzania through:

- Improving ethical conduct both in research and clinical practice
- Harmonising regulations and

operational framework to ensure standardised ethical and regulatory observance across sectors.

- Identifying and fixing loopholes to increase efficiency and effectiveness
- Training to increase acumen of members of RECs and regulatory bodies.
- Networking to increase synergistic cooperation
- Strengthening capacity

of NatHREC including the electronic submission system for faster submission and follow-up of protocols for review.

Successful implementation of the EDCTP project is expected to make major reforms in Health Research ethics review process and regulation framework in Tanzania while improving medicines quality and safety.



*A group photo of SMERT members when met at TFDA on 26th July, 2018 to discuss the implementation of the project*



Picture: Members of National AEFI Committee posed for a group photo during one of the Training Workshop at Bagamoyo

# *Monitoring of Adverse Events Following Immunization (AEFI) in Tanzania*

**The training was facilitated by Dr. Sujeet Kumar Jain from WHO Offices, Zimbabwe. The Committee is one the important instruments by the organization to make informed decision on vaccines safety.**

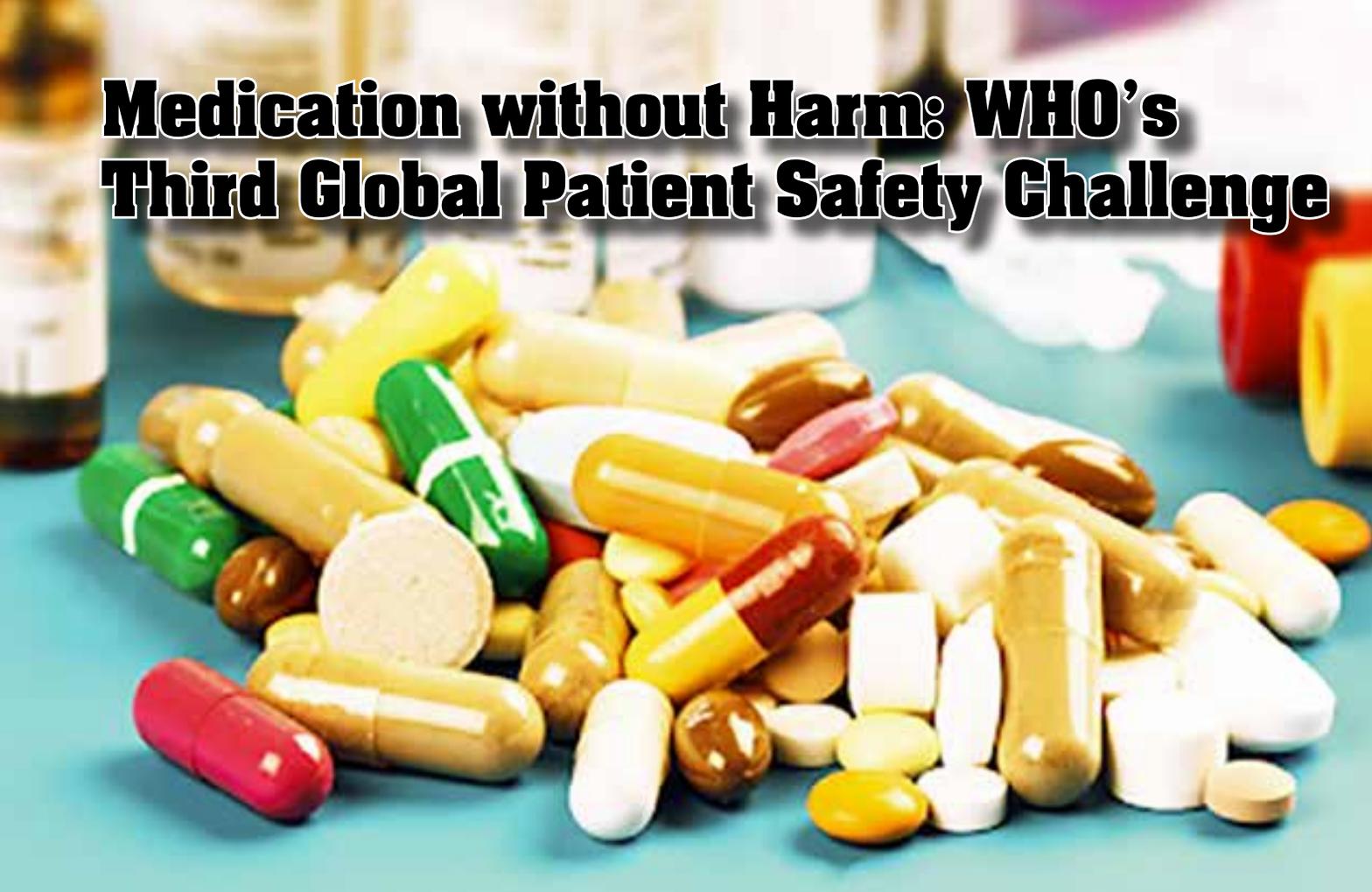
Vaccines provide substantial and highly cost-effective improvements to human health by protecting individuals from particularly children from acquiring deadly infectious diseases which are preventable. Such products are relatively safe and can rarely cause Adverse Events Following Immunization (AEFI). Strong systems for monitoring AEFI has properly determined the success or failure of not only the vaccine but also the programme itself.

For capacity building purposes, the Tanzania Food

and Drugs Authority (TFDA) in collaboration with the Immunization and Vaccine Development Programme with support from World Health Organization conducted training to members of National Advisory Committee on issues related to Adverse Events Following Immunization.

The training was facilitated by Dr. Sujeet Kumar Jain from WHO Offices, Zimbabwe. The Committee is one the important instruments by the organization to make informed decision on vaccines safety.

# Medication without Harm: WHO's Third Global Patient Safety Challenge



**P**atient safety is defined as the absence of preventable harm to a patient during the process of health care and reduction of risk of unnecessary harm associated with health care to an acceptable minimum level. It is a critical global public health issue. Components of patient safety are injury, medication, infection, surgery, diagnosis and policy state.

Unsafe medication practices, medication errors and poor quality pharmaceutical products represent the leading cause of injury and avoidable harm in health care systems worldwide. According to WHO report as many as 1 in 4 patients are harmed whilst receiving primary and ambulatory health care.

Furthermore, 134 million adverse events occur each year in healthcare settings in Low and Middle Income Countries (LMICs), contributing to 2.6 million deaths annually due to unsafe care. Worldwide, medication errors

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**Medication safety is part of patient safety, though in LMICs such as Tanzania is partly affected by under-reporting of ADRs, presence of large number of substandard and falsified products circulating in the markets and irrational use of drugs.**

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cost an estimated 42 billion USD annually. Medication errors occur when weak medication systems and/or human factors such as fatigue, poor environmental conditions or staff shortages affect prescribing, transcribing, dispensing, administration and monitoring practices, which can then result in severe harm, disability and even death.

Medication safety is part of patient safety, though in LMICs such as Tanzania is partly affected by under-reporting of ADRs, presence of large number of substandard and falsified products circulating in the markets and irrational use of drugs. To address these problems, health care professionals, patients, community, policy makers, market Authorization holders and regulatory bodies have a role to play. For example currently, WHO is running a program to raise awareness across the world on patient safety entitled "Global Patient Safety Challenges" with the theme of medication without harm.



## How to recognize Adverse Drug Reaction

Adverse Drug Reactions (ADRs) may become difficult and sometimes impossible to distinguish because they may act through the same physiological and pathological pathways with other different diseases. In order to assess possible drug related ADRs, these steps may be of great use:

- Ensure that the medicine ordered is the medicine received and taken by the patient at the advised dose;
- Verify that the onset of the suspected ADR was after the drug intake, and discuss carefully the observation made by the patient;
- Determine the time interval between the beginning of drug treatment and the onset of the event;
- Evaluate the suspected ADR after discontinuing the drugs or reducing the dose and monitor the patient's status. If appropriate, restart the drug treatment and monitor recurrence of any adverse events.
- Analyse the alternative causes (other than the drug) that could on their own have caused the reaction;
- Use relevant up-to-date literature and personal experience as a health professional on drugs and their ADRs and verify if there are previous conclusive reports on this reaction. The TFDA is very important resource for obtaining information on ADR. The manufacturer of the drug can also be a resource to consult;
- Report any suspected ADR to the person nominated for ADR reporting in the hospital or directly to the TFDA.

# *PAVIA and PROFORMA Project: Strengthening of Pharmacovigilance in Tanzania*

Tanzania Food and Drugs Authority (TFDA) is implementing PAVIA and PROFORMA Projects to support strengthening of Pharmacovigilance systems in the country. PAVIA is a synonym for Pharmacovigilance Africa whereby PROFORMA stands for Pharmacovigilance infrastructure and post – marketing surveillance system capacity building for regional medicine regulatory harmonization in East Africa. The two projects are funded by the European and Developing Countries Clinical Trials Partnership (EDCTP).

PAVIA is a four (4) years Project with the main objective of enhancing the readiness of African health systems to effectively deliver new medical products and to monitor their post-market safety. Other specific objectives for the project include;

- To strengthen governance and financial capacity of PV systems in enforcing PV activities.
- To improve the efficiency and effectiveness of national surveillance systems in capturing and processing reports.
- To build PV capacity and skills to exercise safety-monitoring activities throughout the country.
- To create an enabling environment to implement and sustain PV activities

Activities implemented by the PAVIA are focused on strengthening national PV systems in a collaborative effort with Public Health Programmes (PHPs) and building up medicines safety surveillance activities in the context



*On photo are a mixtures of regulators, academicians and healthcare workers in one of the PROFORMA training activities*

of the introduction of new drugs for Multidrug-Resistant-Tuberculosis.

PROFORMA is a five (5) years Project which aims at strengthening the national Pharmacovigilance infrastructure and post marketing surveillance system in Ethiopia, Kenya, Tanzania and Rwanda. The project focus on capacity building to countries by establishing sustainable the training programs for Pharmacovigilance and forge the partnerships between National Regulatory Authorities and local academic institutions (training-of-the-trainers for sustainable training programs).

PROFORMA Project also intends to facilitate the intensification of the communication and collaboration between National Regulatory Authorities and

Programs for Neglected Tropical Diseases Control and Programs for Immunization and Vaccine Development. The Project therefore is built by a special triangle of Academic Institutions, National Regulatory Authorities and Public Health Programs.

Key implementing partners in Tanzania are TFDA and Muhimbili University of Health and Allied Sciences (MUHAS); other partners are Karolinska Institutet in Sweden, Addis Ababa University (AAU) - and the Ethiopian Food, Medicine and Health Care Administration and Control Authority (EFMHACA) in Ethiopia, University of Nairobi and Pharmacy and Poisons Board in Kenya, University of Rwanda and the Ministry of Health Rwanda in Rwanda and Stichting Lareb from The Netherlands

# Importance of reporting Adverse Drug Reaction



**Unreported ADRs may result in deleterious effects of a medicinal product not being noticeable for a long time or the association between the ADRs and medicine not becoming clear.**

It is a well known phenomenon that new drugs are marketed widely and are often withdrawn from the market due to the adverse drug reactions (ADRs) which occur once they are used by a larger population than covered in the clinical trials. ADRs reporting and monitoring is very important as far as safety of medicines is concerned.

Unreported ADRs may result in deleterious effects of a medicinal product not being noticeable for a long time or the association between the ADRs and medicine not becoming clear.

Therefore, healthcare professionals, patients and community in totality must be especially observant and report suspected ADRs in order to:-

- Determine possible signals of new adverse effects.
- Detect less common, but sometimes very serious ADRs.
- Obtain information about

chronic toxicity (long term toxicity)

- Obtain information about ADRs in special groups (such as children, the elderly or pregnant women)
- Obtain information about drug, herbal and traditional medicines and /or
- Food interactions which is often incomplete or not available
- Detect substandard and falsified medicines

The obtained ADRs information can be readily evaluated at TFDA and may be acted upon to update the product's safety status through various actions. These actions may include but not limited to changes in how a drug is used or advertised, removal from the market, change of treatment policy, addition of information on the patient information leaflet thus, saving the life of patients and others.

# Efforts made by TFDA to Promote Reporting of Adverse Drug Reactions

The TFDA has strived to improve ADRs reporting in the country by laying down the following strategies:-

1. Mass media communication through television, radio, newspapers, brochures, bulletin and social media to increase awareness on PV activities among healthcare providers and community at large.
2. Training and sensitization of healthcare professionals on Pharmacovigilance
3. Improved reporting system such as phone messaging, e-reporting application, toll free phone and an e-mail to facilitate health professionals and patients and/or community to report ADRs
4. Outreach program to sensitize

patients on the importance of reporting ADR.

5. Presence of specific Pharmacovigilance regulations which requires mandatory reporting in Tanzania
6. Improved availability and accessibility of reporting forms such as yellow forms for health professionals, green for patients self report and blue for product quality through focal persons.
7. Sending feed back to all ADR reporters for motivation purpose.
8. Collaborating with Universities to conduct research on pharmacovigilance issues
9. Collaborating with Immunization and Vaccine Development (IVD) programme to improve

reports on adverse events following immunization.

10. Establishment and activation of Pharmacovigilance programs in government and private hospitals and community pharmacies
11. Incorporation of PV module in the Bpharm curriculum in the School of Pharmacy at Muhimbili University of Health and Allied Sciences, with a future plan of rolling out to other private and public medical Universities and other programs such as medicines and nursing.

With all the interventions highlighted above, ADRs reporting in Tanzania is anticipated to increase significantly to meet the WHO requirements.





## **New training opportunity on Pharmacovigilance at Muhimbili University of Health and Allied Sciences (MUHAS)**

Ensuring the safe use of medicines is a combined responsibility of all stakeholders. That means doctors, nurses, pharmacists, and other healthcare workers, researchers, academicians, Marketing Authorization Holders (MAH), patients and community have a special role to play in safety monitoring of medicines. One of the most important way of ensuring drug safety is by reporting Adverse Drug Reactions (ADRs) by the aforementioned stakeholders.

However, the number of ADRs reports received annually by majority regulatory bodies such as TFDA in developing



whereby 76 students were trained and graduated in December 2018. The impact of this training will be a significant increase in the number of documented ADRs in the forthcoming years.

Furthermore, the School of Pharmacy-MUHAS in collaboration with TFDA is planning to roll out the PV module to be incorporated in Doctor of Medicine and Bachelor of Nursing curricula at MUHAS and other public and private Medical Universities in the near future.

The School of Pharmacy at MUHAS in Collaboration with the TFDA is also developing Masters in Pharmacovigilance and Epidemiology program, which will be implemented in the academic year of 2020/ 2021. The Pharmacovigilance short course training is also underway and will be conducted in October 2019, at the School of Pharmacy-MUHAS.

## *How can I make notification of suspected Adverse Drug Reactions/ Adverse Events Following Immunization?*

- Different options available;
- Fill the special forms for reporting suspected ADRs/AEFIs
- Electronic app for Smartphone users. Very simple, just download and install the app on your phone. Key word 'ADR reporting tool'
- Get your computer connected to internet and follow the link [www.tfda.go.tz/adr](http://www.tfda.go.tz/adr)
- Text sms by dialling \*152\*00#
- Toll free number 0800110084

countries is considered to be low as per WHO requirements. Among reasons for underreporting could be lack of formal training on pharmacovigilance (PV). Findings from previous reports have indicated that a deficiency in knowledge and perceptions about PV and ADRs reporting is accountable for ADRs underreporting in both developed and developing countries.

Thus, to impart knowledge, skills and positive perceptions regarding PV and ADRs reporting activities, the School of Pharmacy (Pharmaceutics and Clinical Pharmacy and Pharmacology Departments) at Muhimbili University of Health and Allied Sciences (MUHAS) in collaboration with TFDA, decided to do a mini review on the Bpharm curriculum to include the PV module.

The reviewed curriculum began to be implemented in 2017/2018 academic year,



# *Updates on spontaneous Adverse Drug Reactions reporting*

**The long existed challenge of underreporting was evident in the year 2018. It should be considered that, the role of reporting ADR is the responsibility of each individual.**

For the period between January and December 2018, TFDA received a total of 549 reports, out of which 418 (76.1%) were received through phone text messages, 91 (16.6%) yellow forms, 4 (0.7%) green forms and 36 (6.6%) electronic application. Amongst the received reports, 95 (17.3%) met the quality



physicians 12 (12.6%) and consumers 4 (4.2%) where by 9 (9.5%) of the reporters did not indicate their profession.

Medicines that were mostly reported to cause ADRs in the year 2018 are listed in table 1.

The long existed challenge of underreporting was evident in the year 2018. It should be considered that, the role of reporting ADR is the responsibility of each individual. In this case, healthcare professionals, MAH, patients and community should be persuaded to continue reporting all suspected ADRs and therefore, enhance quick informed decisions on medicines safety matters.

Medicine	No.
Anti-TB containing Isoniazid	17
Lamivudine/ Efavirenz/Tenofovir	13
Sulphamethoxazole/Trimethoprim	10
Kanamycin	6
Arthemether/Lumefantrine	6

Table: Medicines reported the most in 2018

aspects and were entered into the vigiflow database.

The regions that reported ADRs are as shown in Figure 1, most of the reports were from Kilimanjaro. Nine regions namely Kagera, Geita, Simiyu, Mtwara, Katavi, Singida, Tabora, Mara and Songwe did not a send a single report.

All healthcare cadres were involved in reporting ADRs. Majority of them 40 (42.1%) were reported by other cadres which includes nurses, pharmaceutical and laboratory technicians followed by pharmacists 30 (31.6%),

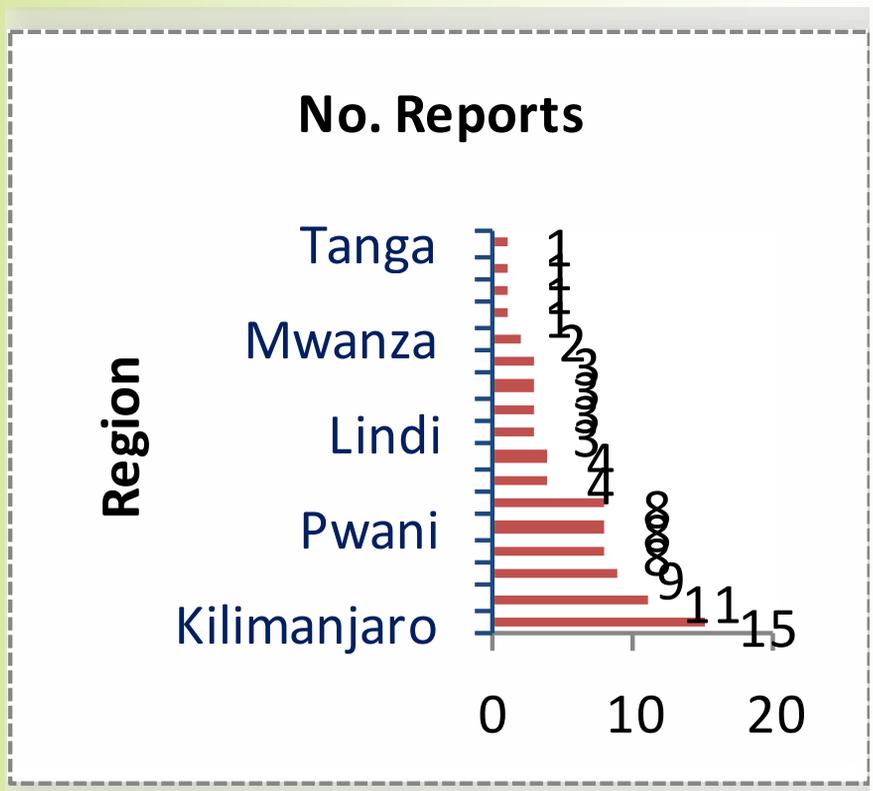


Fig 1: Reports received in 2018

