

## LEVERAGING ON DRUG AND THERAPEUTIC COMMITTEES FOR IMPROVED HIV SERVICE DELIVERY IN CROSS RIVER STATE, NIGERIA.

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### Abstract

**Background:** Drug and therapeutic committee is a key requirement for all hospitals in Nigeria, as it is an avenue for the health facility management team to discuss and resolve key client level therapeutic issues. According to the world health organization, medically inappropriate, ineffective, and economically inefficient use of drugs commonly occurs in health care facilities world-wide. This can lead to a variety of adverse drug reactions which require prompt identification and management.

**Objectives;** The purpose of the study was to review the establishment and functionality of drug and therapeutic committee (DTC) in health facilities supported by the Strengthening Integrated delivery of HIV/AIDS services (SIDHAS) team in cross river state. The study also reviews the use of the DTC as an avenue to address client level issues related pharmacovigilance, improved client refills and pharmaceutical care.

**Method:** A retrospective study of a cross section of primary and secondary health facilities where DTC was introduced and optimized. The study utilized a cross sectional design, using historical pharmaceutical care data. A total of 74 facilities were assessed, quality of care indices like client retention, adverse drug reaction (ADR) monitoring and pharmaceutical care were reviewed. The study period was between 2012 and 2016, data was collected by reviewing the pharmaceutical care reports of the health facilities as well as the client case files, and Antiretroviral therapy treatment registers domiciled at the health facilities. Client refill data in two secondary health facilities were also reviewed. The role of HUGIN in optimizing DTC in SIDHAS supported sites in the state is also reviewed.

**Results:** Prior to the intervention, the percentage of facilities that had DTCs was 5% with only 1% having functional DTCs. During the intervention, DTCs were established and fully functional in 97% of the SIDHAS supported sites in the state. The committees were used as avenues for optimizing Pharmacovigilance by ensuring all key healthcare providers identify and collectively manage ADRs. This resulted to over 2,009 ADR forms generated from clients on anti-retroviral therapy (ART) with various interventions made. Pharmaceutical care issues related to medication adherence were also identified and addressed.

**Conclusion:** DTCs have enhanced critical decision making on efficient and effective patient management monitoring in enhanced pharmacovigilance and pharmaceutical care for HIV infected individuals receiving ART in cross river state, Nigeria.

**Keywords:** Drug, therapeutic, committee, service

### Introduction

The rational use of drugs is often expected of Healthcare workers and clients, as it “requires that patients receive medicines appropriate to their clinical needs in doses that meet their own individual requirements, for an adequate period and at the lowest cost to them and the community”.<sup>1</sup> In both the developed and the developing world, medically inappropriate, ineffective and economically inefficient use of drugs commonly occurs in health care facilities.<sup>1</sup> Health systems around the world are burdened with the challenge of irrational medicine use.<sup>2</sup> They

further observed that such practices are likely to lead to poor health delivery that may put patients' lives at risk and result in wastage of scarce resources that could have been used to tackle other pressing health needs.

In many countries in Africa, irrational use of drugs is a serious and widespread public health problem.<sup>3</sup> It is further observed that Economic, Cultural and Structural factors also affect the use of drugs.<sup>3</sup> Also, inadequate therapeutic monitoring of clients in care often compromise the quality of care resulting in safety issues such as adverse drug reactions, suboptimal therapeutic and clinical outcomes. Others include acquisition of a hospital-acquired infections, receiving the wrong medication (or the right medication through the wrong route).<sup>4</sup>

Rational use of HIV medicines is a critical tool towards ending the AIDS epidemic. This will require uninterrupted access to lifelong treatment for many affected people and a strong, flexible health and community systems, HIV treatment is a unique tool in the AIDS response, preventing illness and death, averting new infections and saving money.<sup>5</sup> Irrational drug use covers diverse areas as drug overuse, underuse, and misuse; the use of too many drugs for a patient (poly-pharmacy), administration of antibiotics for non-infectious diseases, injection use when oral medication will achieve desired result, self-medication, etc.<sup>8</sup> In hospitals, there is need to set up a structure with the responsibility for monitoring drug use.

"A Drug and Therapeutics Committee (DTC) with its diverse technical competencies provides a forum to monitor and improve medication use in a health facility. In many developed countries, a well-functioning DTC has been shown to be very effective in addressing drug use problems".<sup>9</sup> Some of the key functions of the Drug and therapeutic committee have been identified to include;

"Drug and therapeutics committee (DTC) provides an avenue to improve drug use and reduce costs in hospitals and other health care facilities. It serves as an avenue of providing advice on all aspects of drug management, developing drug policies, evaluating, and selecting drugs for the formulary list, developing (or adapting) and implementing standard treatment guidelines, assessing drug use to identify problems, conducting interventions to improving drug use, managing adverse drug reactions and medication errors and informing all staff members about drug use issues, policies and decisions".<sup>9</sup>

Prior to the Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) project, DTC was either nonexistent or existing but poorly functioning in most health facilities supported by the project. Several factors were responsible for this ranging from poor collaboration between the different health professionals in the facilities to inadequate personnel, lack of interest in monitoring medications' effects on the clients, and request for funding supports for refreshment at meetings which was not forthcoming in many instances. Consequently, the many manifestations of the medications used on clients which were having effects on their expected outcomes were either not monitored or poorly monitored.

ARV medications have both favorable and unfavorable effects thus, achieving the expected health outcomes of patients requires ongoing monitoring of the effects of the medications on the patients.<sup>7</sup> To achieve the desired health outcomes, unwanted effects such as Adverse Drug Reactions (ADR), medication non-adherence, poor suppression of viral load, etc needed to be monitored and guidance provided to the health care workers on acceptable practices that promote the achievement of the desired medications' effects while minimizing the unwanted effects.<sup>7</sup>

It was therefore necessary to have a functional body within the facilities with responsibility for this task. The Nigerian' National Drug Policy recommended the establishment of DTC in all tertiary and secondary health care centers to monitor medications effects on patients. HUGIN engaged with relevant stakeholders and established DTCs in facilities where it was not existent, and strengthened the existing but rarely functioning ones.

The purpose of the study is to review the establishment and functionality of Drug and Therapeutic Committee (DTC) in health facilities supported by the SIDHAS team in Cross river state; to ensure that all healthcare workers in different service delivery points in the health facility collaborate effectively to ensure efficient and effective patient management and monitoring; and to ensure ownership and sustainability of DTC by the Government of Nigeria. Ownership was demonstrated by the increased willingness of health facility staff to actively and intentionally organize monthly meetings with little support from the SIDHAS team after the intervention.

## Method

The study was a retrospective study of a cross section of primary and secondary health facilities where DTC was introduced and optimized. The study thus, utilized a cross sectional design, using historical pharmaceutical care data. A total of 74 facilities were assessed, quality of care indices like client retention, adverse drug reaction (ADR) monitoring and pharmaceutical care were reviewed. The study period was between 2012 and 2016, data was collected by reviewing the pharmaceutical care reports of the health facilities as well as the client case files, and Antiretroviral therapy treatment registers domiciled at the health facilities

Pharmacovigilance committees and its functions and benefits. HUGIN also supported the Government facilities to fund refreshments during DTCs in facilities across the country. Intensive onsite mentorship was routinely provided to facility staff and in some many facilities, staff were supported to hold meetings independently without

the presence of project staff. Facility focal persons were encouraged to adopt the typical organogram for DTC functionality is outlined below.

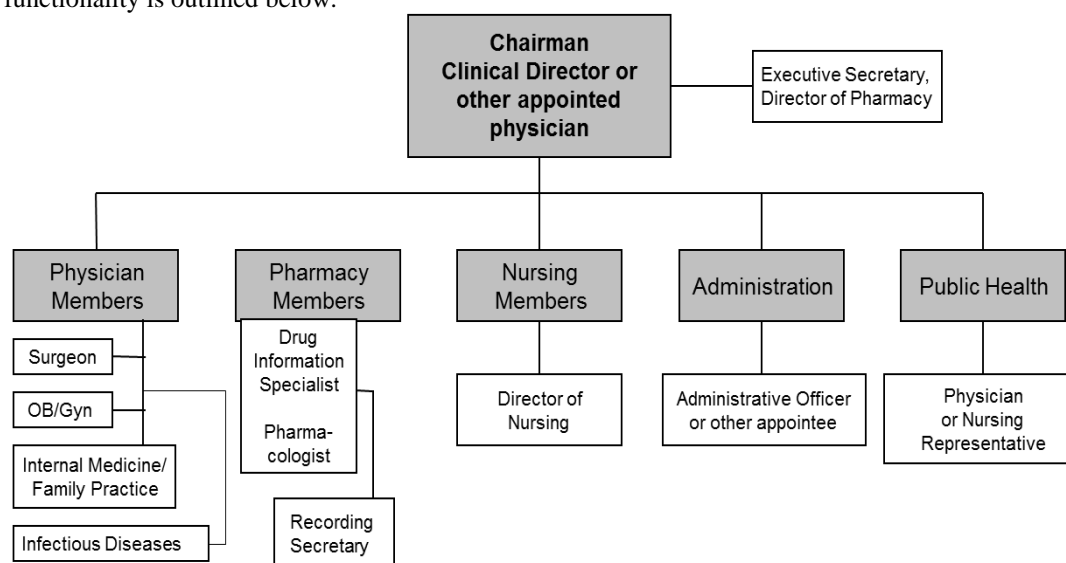


Figure 1: A Typical Drug and Therapeutic Committee Organogram<sup>8</sup>

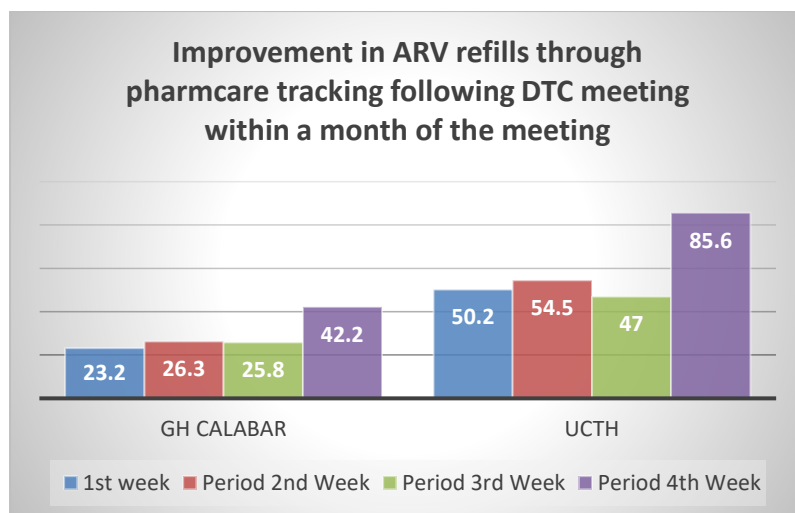
*Management Sciences for Health and World Health Organization. 2007. Drug and Therapeutics Committee Training Course. Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.*

SIDHAS promoted DTC Institutionalization in all supported sites with the goal to discuss issues affecting service delivery with emphasis on key focus areas such as viral load cascade, retention, documentation of service delivery, Isoniazid Preventive Therapy, improved medication adherence, and Pharmacovigilance. An assessment of all supported sites and identified the peculiar needs and challenges unique to each facility was done.

## Results

HUGIN through the SIDHAS project have instituted and strengthened the committee in 74 supported ART and PMTCT sites in cross river state. DTC meetings were held in all the supported sites across the country during the period. Due to the functionality of DTC across supported sites, the following was optimized within a period of 4 years; drug therapy problems monitoring and improved pharmacovigilance. (<100 ADRs/Year documented and reported prior to the intervention to >1000 ADRs/Year reported forwarded institutionalization of DTC), improved facility refills due to enhanced client tracking were observed following a DTC meeting in secondary facilities like General hospital, Calabar (23.2%, 42.2%) and university of Calabar teaching hospital (50.2%, 85.6%). This also demonstrated improved pharmaceutical care in ensuring that clients eligible for refills are tracked back via phone calls, provided medication adherence counselling and refilled ARVs.

At the beginning of the SIDHAS project, the percentage of facilities that had DTCs was 5% , while 1% of those facilities had functional DTCs. HUGIN and the SIDHAS team ensured DTC was established and functional in all supported sites. During the SIDHAS project, HUGIN supported the formation of DTCs in 97% of supported sites and DTC was functional in 100% of those sites. The committee over the course of implementation of the project has been used as an avenue to optimize Pharmacovigilance by ensuring all key healthcare providers identify and collectively manage ADRs. This resulted to over 2009 ADR forms generated from clients on ART with various interventions made. Majority of the clients reported dizziness, weakness, sleepless nights, insomnia and headaches. This may be connected to the drug regimen tonofovir/lamivudine/efervirenz, which majority of the clients were placed on, during the intervention period.



*Improvement of refill rates at General Hospital Calabar and University of Calabar Teaching Hospital for the month of April, following the DTC meeting in the previous month.*

## Discussion

DTC has been demonstrated to improve the quality-of-service delivery to patients in care<sup>9</sup>. This we observed from our study that through the establishment of DTC, there was an improvement in the need and urgency for healthcare workers to actively monitor for pharmacovigilance. We also observed that prior to the intervention, only pharmacy staff were passively screening for ADRs. However, after the intervention and following the optimization of the committees, other key healthcare workers like clinicians and nurses were all involved in active monitoring for pharmacovigilance. Collaboration of health care workers can be observed for efficient service delivery is essential in ensuring DTC functionality<sup>7</sup>. We observed that in facilities where a dichotomy existed among the different healthcare providers with respect to inefficient/inadequate communication, DTC successfully created an avenue for the representatives of the different units to meet, discuss and take collective decisions on client management. Thus, a better working relationship has been established among the different healthcare personnel in the health facilities.

DTC is a key part of the national health policy and it is expected that all the key healthcare workers participate in client monitoring management through the DTC and other facility level teams.<sup>8</sup> The team ensured intensive orientation for all facility staff on the standard operating procedure of DTC functionality, as well as its benefits to client management. This led to increased acceptance by different health personnel in the facilities. The involvement of the representatives of the state agency for control of STI and AIDS in DTC meetings also significantly helped in creating ownership and sustainability of the process. Though many facilities now hold DTC meetings on monthly basis, some of the larger sites like tertiary health facilities are unable to hold monthly meetings and may hold bimonthly or quarterly meetings due to availability of resources for its coordination. Hence, sub-committee meetings such as switch meetings and Pharmacovigilance meetings may hold more frequently, since they require less number of persons to take decisions on client care.

The sub committees increased the effectiveness and efficiency of decision making on client management. funding of DTC meetings by the SIDHAS team also led to increased participation by the different units in the facility.

It was observed that significant follow-up on decisions taken during the meetings is essential to ensure successful implementation of intervention. Hence, designate a focal person to monitor implementation before the next meeting. Meetings held on days that are not clinic days or clinic days with less clients scheduled for visits. This is to avoid interference with client care and waiting time. Hence the various unit heads should agree on the best time for the meetings. Representative of the support group of clients may be invited to participate in some meetings to provide insight on the client perspective. This was done in accordance with the proposed organogram.<sup>8</sup>

A key challenge experienced during implementation was overcoming the naivety for organizing the meetings every month due to lack of funds for refreshment, inadequate manpower and the lack of time. To overcome this, advocacy meetings were then made to the key stakeholders at the State Ministries of health, as well as the hospitals management boards on the need to institutionalize DTCs. These stakeholders include the commissioner of health, permanent secretary, state ministry of health, director of pharmaceutical services among others. Advocacy was also made the government of Nigeria state Implementation team representatives and heads of the health facilities as well as different unit heads in the facility, with the aim of ensuring ownership of DTC.

Human resource for health will further ensure the success of DTC.<sup>9</sup> To ensure the availability of Clinicians, Pharmacists, Laboratory scientists and Nurses in health facilities with inadequate manpower, HUGIN liaised with the National Youth Service Corp in some states to deploy key health personnel on National service to supported sites. These personnel would eventually support ART services, as well as strengthen DTC in facilities. Over the period however, some facilities having trouble in holding frequent DTC meetings were advised to ensure Incorporation of DTC into other facility meetings such as Continuous Quality Improvement (CQI), Hospital Management Team meetings among others. This was also due to decreased funding for refreshments.

Thus, The DTC meetings in the different facilities ensured appropriate intervention such as real time feedback to the prescriber for regimen modification in some instances, medication counselling to the clients, consideration for dose modification among others. Weekly refill data analysis was frequently reviewed by participants and measures discussed to ensure improved refills and ultimately retention. Thus, there was improved refill rates in some facilities that previously had low refills.

## **Conclusion**

The establishment of functional DTCs in all the SIDHAS supported sites by HUGIN has ensured an improvement in pharmacovigilance for clients on ART, client tracking for refills through pharmaceutical care counselling, as well as improved enthusiasm for patient management monitoring. If the meetings continue to hold constantly, then further improvement will be seen in client management.

## **Recommendations**

There is need for the Hospitals management board and the Ministry of health to embark on periodic Joint supportive supervisory visits to assess level of implementation of DTC across health facilities. DTC functionality should be a pre-requisite for accreditation of health facilities in the country. It is essential that feedback on DTC activities across health facilities should be provided to the various leads in the state Ministry of health to re-enforce decision making.

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## **Conflict of interest**

We will like to declare that there was no conflict of interest during the study.

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