** STUDENTS INDUSTRIAL WORK**

**EXPERIENCE SCHEME**

**(SIWES)**

**TECHNICAL REPORT**

BY

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**UNDERTAKEN AT**

**Federal ministry of health Abuja**

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**(1st june– 1st of September 2018-2019)**

**CERTIFICATION**

This is to certify that this report is a detailed account of the Student Industrial Work Experience Scheme (SIWES) undertaken by IKEOKWU CHINONSO STEVENSON at FEDERAL MINISTRY OF HEALTH **ABUJA** for a period of 3month and has been prepared in accordance to regulation guiding the proportion of reports in the Faculty of PHARMACOLOGY, Afebabalola university ado ekiti

**STUDENT’S NAME AND SIGNATURE** **DATE**

**SIWES SUPERVISOR NAME AND SIGNATURE** **DATE**



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Pharmacovigilance has its own unique terminology that is important to understand. Most of the following terms are used within this article and are peculiar to drug safety, although some are used by other disciplines within the pharmaceutical sciences as well.

Adverse drug reaction is a side effect (non intended reaction to the drug) occurring with a drug where a positive (direct) causal relationship between the event and the drug is thought, or has been proven, to exist.

Adverse event (AE) is a side effect occurring with a drug. By definition, the causal relationship between the AE and the drug is unknown.

Benefits are commonly expressed as the proven therapeutic good of a product but should also include the patient's subjective assessment of its effects.

**ACKNOWLEDGEMENT**

I would like to acknowledge and show my Profound Gratitude to all those that have contributed in small and great ways to the overall success of my Hospital Pharmacy Training Programme in FEDERAL MINISTRY pharmacy department. Especially in the aspect of Work ethics, Behavioral attitude to work and Discipline. I will not forget my Gained experiences and how you Impacted me Mentally and Academically in the short run.

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1. **INTRODUCTION**

**1.1 PURPOSE OF TRAINING**

The Student Industrial Work Experience Scheme (SIWES) was initiated in 1973 by the Industrial Training Fund (ITF). This was to update practical knowledge of students in the Universities, Polytechnics and Colleges of Technology.

It was aimed at bridging the gap between the theoretical knowledge acquired in classes and technical knowledge in the industry by providing students with the opportunities to apply their educational knowledge in real work situations. Over the years, SIWES has contributed immensely to building the common pool of technical and allied skills available in the Nigeria economy which are needed for the nation’s industrial development.

Furthermore, the place and relevance of SIWES is underscored by the fact that the scheme contributes to improving the quality of technical skills generally available in the pool from which employer’s source technical manpower Its gives student the opportunity to blend the theoretical knowledge acquired in the classroom and with practical hands-on application of knowledge required to perform work in the industry. Also, it prepares students for employment and makes the transition from school to the world of work easier after graduation.

I undertook my SIWES at ABUJA federal ministry of health(Pharmacy Department) which is located at federal secretariat Nigeria from june to September 2018.

**Pharmacy** is the science and technique of preparing and dispensing drugs. It is a health profession that links health sciences with chemical sciences and aims to ensure the safe and effective use of pharmaceutical drugs.

The scope of pharmacy practice includes more traditional roles such as compounding and dispensing medications, and it also includes more modern services related to health care, including clinical services, reviewing medications for safety and efficacy, and providing drug information. Pharmacists, therefore, are the experts on drug therapy and are the primary health professionals who optimize the use of medication for the benefit of the patients.

**1.2 BRIEF OVERVIEW OF FEDERAL MINISTRY OF HEALTH**

It’s a tertiary health institution which is made up of several departments: Internal Medicine, Psychiatry, Obstetrics and Gynecology, Dentistry, Paediatrics, Oncology, Radiodiagnosis, Surgery, Laboratory Medicine and Allied services (Medical Social services, Nursing services, PHARMACY, Physiotherapy).

**1.3 PHARMACY DEPARTMENT**

The Pharmacy Department is distributed into several units across federal ministry of health. It’s primarily responsible for the proper supply of medicines alongside proper storage and distribution throughout the hospital. They (Pharmacist) mostly work alongside the physicians and Nurses in the Patients wards in giving the Right Medications, Right Dose and Right drug counselling to the Right Patients.

The majority of hospital Pharmacists are involved in patient Pharmaceutical Care which is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improves a patient’s quality of life. These outcomes are the cure of diseases, elimination or reduction of a patient’s symptomatology, arresting or slowing of a disease process or preventing a disease. They also involve in dispensary management, medicine information, aseptic compounding and medication safety.

**PHARMACY UNITS IN Federal ministry of health**

* EMERGENCY UNITS
* Accident and Emergency Units
* Children Emergency Units
* In-Patient Pharmacy Unit
* IPP Unit
* Staff Clinic Pharmacy Unit
* Out-Patient Pharmacy Unit
* Drug Production Unit
* Oncology Pharmacy Unit
* A Block Pharmacy Unit
* C Block Pharmacy Unit
* APIN (AIDS preventive initiative) Pharmacy Unit
* Theatre Drug Unit
* Guinness Eye Center Pharmacy Unit
* Pharmacy Main Store

**ORGANOGRAM OF THE PHARMACY DEPARTMENT**

DIRECTOR OF PHARMACEUTICAL SERVICES

DEPUTY DIRECTOR OF PHARMACEUTICAL

SERVICES

PRINCIPAL PHARMACIST

SENIOR PHARMACIST

PHARMACIST

CHIEF PHARMACY TECHNICIAN

SENIOR PHARMACY TECHNICIAN

PHARMACY TECHNICIAN

INTERN PHARMACIST

SIWES STUDENT

**2.0 TRAINING PROGRAMME**

**2.1 DESCRIPTION OF TRAINING EXPERIENCES**

During my SIWES training at federal ministry of health pharmacy, I carried out my training program in two pharmacy departments. i.e. federal ministry of health and (NBMA)

* **CHILDREN EMERGENCY PHARMACY**

I resumed work at the Children Emergency Pharmacy Department on the 1st june, 2018. On the first day, I was introduced to the operations and activities in the Unit. Before the end of the day, I got familiarized with the Unit and Drugs present in the Pharmacy. The Children Emergency Unit deals with Child Patients in Wards (I.e. Olikoye Ransome-Kuti Children Emergency Ward, D1, D2, D3, E. They attend to Patients in the ward by dealing with their treatment sheet which contains their profile, Drugs prescribed by the physician. These Treatment sheets are sent to the pharmacy for review and dispensary of the drugs prescribed to respective patients in the ward.

I learnt about the proper routine of attending to Prescriptions (Interpretation, Assessment and Dispensing and Counseling), I went through most of the Prescriptions to Check for its completeness and accuracy. Learning extensively about the component of a prescription. On a daily basis, I learnt while carrying out the Desk work Activities in the Unit. As I was allowed to Assess, Dispense and counsel some patients, all under the supervision of the pharmacist-in-charge.

During my training period in this department, I learnt how to carry out actual drug compounding, initially by checking for the drug suitability/stability in Syrup in the official book, how to calculate the required number of tablets and volume of syrup to be used for the formulation, and also the various compounding ethics and labelling. I was also allowed to compound some drugs(tablet) needed to be formulated into syrup formulation under the supervision of the pharmacist.

***No of Tablet = Prescribed drug strength × Daily dosing × (Duration of use + 1)***

***Available drug strength***

***Volume of Syrup = 2.5ml × Daily dosing × (Duration of use + 1)***

***Where; Duration of use is usually 2 weeks(14days) and the +1 is for calculation in excess for spillage, Prescribed drug strength is the amount in mg of the drug prescribed by the doctor, Available drug strength is the amount in mg in which the drug usually comes as, Daily dosing is the frequency of drug usage in one day.***

Also, the First day of the Month, we as a Unit go to the wards to carry out the headcount of the patients currently in the ward, Recording and Updating their Data and their diagnosis so as their Medications obtained from their case file. At the End of the month, I alongside the Pharmacists took Stock count of all the drugs in the unit which is an end-of-the-month routine in the pharmacy. At the Later End of my Training Programme in Federal ministry of health (Precisely my 3rd week), I was once privileged alongside my other SIWES colleague to join the Medical student alongside with the Consultant for a ward-round in ORKCE ward, I was able to learn new Medical Knowledge where I learnt about the SOAP format used for documentation, drug-drug interaction, adverse effects and also intervened and contributed in the process of learning.

* **STAFF CLINIC PHARMACY**

After 3weeks training at Federal ministry of health, I was transferred to the Staff Clinic Pharmacy Department for the rest of my Training Programme in National biosafety management agency (NBMA). I was orientated on the operations and Activities been carried out in the unit.

Staff clinic Pharmacy is under the Family Medicine department where they deal with General Out-Patients under the:

1. **NHIS (National Health Insurance Scheme)** I.e. Government and Non-Government Workers, LUTH workers and alongside Students under TISHIP (Tertiary institution social health insurance scheme) who are under this scheme can access good and effective Health care services at an affordable cost through various prepayment systems. Those under this scheme contribute monthly or annually to the pool in which the Collective money is been used to subsidize Health cost for all beneficiaries.
2. **Fee Paying Patients** I.e. Those that aren’t under the NHIS. Here, Patients would have to pay in full for their drugs

Some of the available Drugs are NHIS fully covered or partially covered while some are not covered at all. NHIS Beneficiaries would have to pay 10% of their total drug cost while the remaining 90% would have been covered by the Health Insurance Scheme.

On resumption, every morning except Wednesdays (No clinic days), I do attend the Health Talk meeting (where Health Practitioners alongside Pharmacists educate and counsel Gathering of Patients on recent trends of Diseases and About Personal Hygiene). Under the supervision of pharmacists, I participated in Prescriptions Assessment, dispensing and sometimes Counselling of Patients. Also, toward the end of every working hours, I’m assigned the job of inputting the patient’s data and prescription records into the system for record purposes as it made me learn the Importance of Documentation in Pharmacy.

I got familiarized with the classes of Drugs present in the Unit day by day. During my work period here at Staff clinic pharmacy, I was made to read up, do some findings and present on a topic, "The Recent Trends in the Management of Hypertension" and also talk about 5 drugs on a daily basis (their Indications, Interactions and side effects)

**RELATION OF WORK EXPERIENCE TO THEORY LEARNT IN SCHOOL.**

**With Respect to theory learnt in school:**

* I was able to link the compounding technique learnt in pharmaceutics to the compounding of drugs I carried out in Children Emergency Pharmacy. In which I learnt new calculation methods of compounding.
* I was able to carry out adequate pharmaceutical care and resolve drug therapy problems, also counselled several patients on how and when to use their medications.
* I was able to appreciate Pharmaceutical care more after we visited the patient’s wards on a ward-round with consultants i.e. checking on them, assessing their treatment sheet and intervening where necessary in their medication
* I was able to learn more about drug-drug interaction and drug-food interactions and side effects of drugs based on what I learnt in Clinical Pharmacy and Pharmacology.

1. **OBSERVATIONS AND CONTRIBUTIONS**

**3.1 OBSERVATIONS**

As a student, my first observation was the cognition of the difference between the “school environment and its activities” and the “Work Environment and Activities”, as it is a different ball game entirely. I observed that a Hospital Pharmacy does not look like a classroom environment where lectures are being taught. It’s a place where one practice what he/she has learnt in the classroom. Also, a Place where you have the Opportunity to learn while you delivering services to the patients in relation to unusual Clinical problems, uncommon Drug interactions and side effects.

Also observed that a Hospital pharmacy practice is one of the best fields of Pharmacy where one can have a vast knowledge of many disease cases and their different pharmacological approach of treatment, Knowing the patients and having their drug profile and history assessable to the pharmacist. Also, Drug companies come around to present on their new development of drugs and indication of their products, their interactions, side effects and superiority over other products which helps to improve Learning and awareness of their products.

**3.2 CONTRIBUTIONS**

My contributions were shown in my work done and services as a SIWES student. I was able to maximize the Job efficiency and work output in my Posted Units by assisting in carrying out the desk work activities of the pharmacy such as aiding the work rate of the pharmacists by Assessing, Dispensing Prescriptions, and Counseled Patients under Supervision, Stock counting and Compounding of Drugs into Liquid formulation. Thereby speeding up the job completion process and reducing the workload of the working Pharmacist in the units

Also, assisted in putting into the Hospital records, the Patient’s data and their drugs information.

**3.3 CHALLENGES ENCOUNTERED DURING PERIOD OF TRAINING**

Some of the challenges I encountered during my SIWES programme are:

* Costing and Filling the prescriptions but as time went on, I was able to get accustomed to the system, prices and calculations of the number of tablets the patient will use for a particular duration indicated.
* Short-staff number of Pharmacists available, which results in much more work-load on an individual pharmacist, slowing down the rate of delivering services to the patients. Which could lead to frustration on both ends
* Shortage of drugs and Slow Supply of “out of stock” drugs and so in these cases, I had to write out the outstanding drugs for the patient so they could purchase outside.
* Understanding some doctors’ handwriting was another problem I encountered but I was able to sort out this problem with the help of the pharmacists.
* Errors in costing due to sudden changes in prices of drugs, wrong dosage, strength etc.
* Dealing with difficult patients in terms of attitude and impatience. With a positive attitude towards work, I was able to deal with this.

**4.0 CONCLUSIONS AND RECOMMENDATION**

**4.1 CONCLUSION**

My Three months Training as a Pharmacology Student at federal ministry of health hospital (Pharmacy Unit) was a huge success and a great time of acquisition of knowledge and skills. It brought a more practical approach to the knowledge of pharmacy and was an eye-opening to the scope of hospital pharmacy practice including their roles, responsibility in the health care system in large. Through my training, I was able to appreciate my chosen course of study (Pharmacy) even more, because I had the opportunity to blend the theoretical knowledge acquired from school with the practical hands-on application of knowledge gained here to intervene in Patient-related Clinical Problems that contributed in a way to my productivity in the organization. My training here has given me a broader view to the importance and relevance of Pharmacy in the immediate society and Hospital, as I now look forward to joining my future colleagues to improving the Pharmacy Profession positively after graduation. A wide variety of experiences was acquired with relation to Prescription Interpretations & Assessments and Dispensary, Drug interactions and Pharmaceutical care.

I have also been able to improve my communication and presentation skills and thereby developed a good relationship with Pharmacist and Interns at work and majorly with the patients. I have also been able to appreciate the connection between my course of study and other health-related disciplines in achieving a common goal of the Patient’s interest.

**4.2 RECOMMENDATIONS**

**With Respect to Challenges stated above:**

I use this means to make the following recommendations.

Firstly, I recommend that Technology should be much more improved upon in the aspect of storage of medical records of patients present in the wards, and for also the “HospiPharm” software used in assessing & costing of prescriptions should be frequently updated in other to obtain the trends of drugs available in the Hospital and their current prices.

Also, recommend that the Government should employ more qualified Pharmacologists in other to make work Easier, Faster and more Accurate. They have insufficient or no time at all in proper supervision and engagement of trainees. And also, I recommend that the Government should provide accountants or financial specialist who would be in charge of providing the cost of drugs and also the bill of the patients as a full-time job thereby allowing the pharmacist to focus solely on patient drug therapy and pharmaceutical care in order to improve the quality of healthcare and life in general.

Allowances should be paid to students during their programme just like NYSC and not after. This would help them a great deal to handle some financial problems during their training course.

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