**TECHNICAL REPORT ON SIWES [ STUDENT’S INDUSTRAIL WORK EXPERIENCE SCHEME] UNDERTAKEN AT PALMER’S HOSPITAL PORTHARCOURT FROM JUNE – AUGUST**

**BY**

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**TO**

**DEPARMENT OF PHARMACOLOGY, COLLEGE OF MEDICINE AND HEALTH SCIENCES, AFE BABALOLA UNIVERSITY ADO-EKITI, EKITI STATE.**

**IN PARTIAL FULFILMENT TO THE REQUIREMENTS FOR THE AWARD OF BSC. DEGREE IN PHARMACOLOGY**

**CERTIFICATION**

This is to certify that the work during the three months industrial training was carried out by Ogbu Emmanuela kelechi of the department of pharmacology at palmer’s hospital port Harcourt, rivers state under the supervision of Dr beke, with the report presented to the department of pharmacology, Afe Babalola university Ado-ekiti, Ekiti state Nigeria, during the 2019/2020 student’s’ industrial work experience scheme[ SIWES].

Dr. Omoaghe moses

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Supervisor Signature and date

Dr. Adeoluwa Olusegun

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HOD of pharmacology Signature and date

**ACKNOWLEDGEMENT**

I am grateful to God almighty for his help and support. Deep appreciation and a big thank you to my departmental supervisor Dr ibekwe okam for his area for the visit to my area of attachment during this program.

Very special thanks to the staff of ABUAD [ Afe Babalola university Ado-Ekiti Nigeria] especially lecturers of the department of anatomy for their assistance not only on this report but academic wise.

I am also very grateful to palmer’s hospital, port Harcourt, especially my industrial based supervisor; Dr. ibekwe okam and Mr. onyebuchi Patrick

for their encouragement and help during my industrial attachment.

Finally, I express my gratitude to my parents for financial support and encouragement.

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**Chapter 1**

**MEANING AND HISTORY OF SIWES.**

The Students Industrial Work Experience Scheme (SIWES) is a skills training programme designed to expose and prepare students of universities and other tertiary institutions for the Industrial Work situation they are likely to meet after graduation.

Student Industrial Work Experience Scheme (SIWES) was established by Industrial Training Fund (ITF) in 1973 to solve the problem of lack of adequate practical skills preparatory for employment in industries by Nigerian graduates of Tertiary Institutions

The scheme and major background behind the embankment of students in SIWES was to expose them to the industrial environment, educate students on industrial based skills essential for a smooth transition from the classroom to the world of work and enable them develop occupational competencies so that they can readily contribute their quota to national economic and technological development after graduation. Students of tertiary institutions are given the opportunity of being familiarized and exposed to the needed experience in handling machinery and equipment which are usually not available in the tertiary institutions. The major benefit acquiring to students who participate conscientiously in SIWES are skills and competencies they acquire. The relevant production skills remain a part of the recipient of industrial training as life-long assets which cannot be taken away from them. This is because the knowledge and skills acquired through training are internalized and become relevant when required to perform jobs or functions

**History and background about palmers hospital**

**A BRIEF HISTORY**

Palmars Hospital was founded twenty seven years ago, on the 8th of April, 1993. A fully featured medical facility, we are located at 5/7 Agip road, Mile 4, Rumueme, P.O.Box 7650, Port Harcourt, Rivers State. Palmars Hospital is home to highly competent medical professionals who are fully dedicated to ensuring the best medical care for their patients and clients. We offer a wide range of medical services to individuals as well as cooperate organizations.

As a result of the excellent services and highly competitive prices we have offered over the years, we have gained the confidence of some great companies across the state who are now in partnership with the hospital as their main Healthcare provider

 To stem the drift to overseas in search of curative and preventive care, we have paid undiluted attention to the following areas: General Surgery, Obstetrics and Gynaecology, Cardiology, Internal Medicine/Gastroenterology, Emergency Medical Services, Radiological Services, Critical care, Orthopaedics, Occupational/ Industrial Medicine, Physiotherapy, Ultrasonography, Pre-employment Examination, Periodic and Routine Examination,Well-equipped Laboratory and Ambulance Services.

**Our Mission Statement**

To provide quality healthcare services by practicing patient-centered care that inspires trust through stewardship and integrity

**Chapter 2**

**INTRODUCTION**

 I was posted to the pharmacy department in the palmer’s hospital port Harcourt, rivers state, for my industrial training.

 The pharmacy department deals with ensuring the quality of medicines prescribed to patients are suitable, advising patients about medicine, including how to take them, what reactions may occur and answering patients’ questions

 In this department I had the opportunity of working hand in hand with the chief pharmacist, where I learnt how to

1. Read and understand doctor’s prescription such :

b/ds – two times daily

t/ds – three times daily

1. Learn about different drugs such as anti-malaria drugs, anticonvulsant, antihypertensive, anti-depressant, anti-biotics, analgesic, supplement
2. I learnt contraindication of so many drugs, knowing when to give the appropriate drug incase of underling illnesses.
3. Had presentation on some of the drugs such as antihypertensive drugs, anti-malaria drugs and discuss the next line of drugs and treatment.
4. Attended some presentations that talked about the new drugs in the market and their effects, and understanding why it is more efficacious than the previous ones.

**DURATION OF WORK**

 During my posting to the pharmacy at palmer’s hospital port Harcourt, I was instructed to resume work at 8 o’clock in the morning and close by 4.pm in the evening in the evening for every working day [ Monday to Friday], My training lasted for 12 weeks [ 3month]

**SUPERVISOR**

I was supervised by Dr. ibekwe okam , who is the chief pharmacist in the hospital that assigned Mr onyebauchi Patrick to instruct me on what to do during my training in the pharmacy.

**PRINCIPLE**

 Pharmaceutical care is a patient centered, outcomes oriented pharmacy practice that requires the pharmacist to work in concert with patient and the patient’s other health care providers to promote health, to prevent disease, and asses, monitor, initiate, and modify medication use to assure that drug therapy.

 In the next chapters, I will be discussing the different drugs learnt, the contraindication and indication, mechanism of action, new line of treatment etc.

**Chapter 3**

**ANTI-HPERTENSIVE DRUG**. Antihypertensives are a class of drugs that are used to treat hypertension (high blood pressure). Antihypertensive therapy seeks to prevent the complications of high blood pressure, such as stroke and myocardial infarction.

**PRESCRIPTION : given according to doctors prescription**

 **Types of hypertension:** pre hypertension; SBP: 120- 135 mmHg and DBP: 80-89mmHg, Hypertension 1; SBP: 140-159mmHg and DBP: 90-99mmHg

 Hypertension 2: SBP: more than or equal to 160mmHg and DBP more or equal 100mmHg Pregnancy induced : because of the increased production of enzymes and hormones during pregnancy

**RISK FACTORS :** obesity gender family history alcohol stress

**ANTIHYPERTENSIVE AGENTS**

* Diuretics: amiloride furosemide, hydrochlorothiazide
* ACE inhibitors : captopril enalapril ramipril
* Angiotensin [AT1 receptor blockers ]: losartan valsartan
* Direct renin inhibitors: aliskiren
* Beta adrenergic blockers: propranolol, atenolol
* Calcium blockers: felodipine verapamil
* Beta + alpha adrenergic blockers: labetalol, carvedilol
* Alpha adrenergic blockers: prazosin and terazosin
* Central sympatholytic: clonidine and methyldopa
* Vasodilators: Arteriolar; hydralazine

 Arteriolar + venous ;sodium nitroprusside

**TREATMENT OF HYPERTENSION**

1. **Hypertensive emergency**: it is rare but life threatening conditions [ systolic Bp greater than 180mmHg or diastolic Bp greater than 120 mmHg] with evidence of impending or progressive target organ damage such as stroke myocardial function

A variety of medications are used, including **calcium blockers** [ nicardipine and clevidipine] **adrenergic receptor antagonist** [ phentolamine and labetalol] **the vasodilators** hydralazine and the **dopamine agonist** fenoldopam

1. **Resistance hypertension :** it is defined as blood pressure that remains elevated despite administration of an optimal three drug regimen that includes diuretic. The most common causes of resistance hypertension are
* Poor compliance
* Insufficient dose/drug

 **How to treat hypertension**

* . Except for stage 2 hypertension, start with a single most appropriate drug
* Follow A B C D rule [ A- ACE inhibitors/ARB B-B blocker C-CCB, D-diuretics] while A and [ in some cases] B are preferred in younger patient below 55 years, C and D are preferred in older above 55 years for the step 1 or monotherapy
* Initiate therapy at low doses; if needed increase dose moderately
* If only partial response is obtained, add a drug from another complimentary class or change to low dose combination
* If no response, change to a drug from another class or low dose combination from other classes
* In case of side effect to the initial chosen drug either substitute which drug of another class or reduce dose
* Majority of stage ii hypertensive are started on a 2-drug combination

 **TREATMENT OF HYPERTENSION IN PATIENT WITH CONCOMITANT DISEASE**

1. **High coronary disease risk:** diuretics, B- blockers, ACE inhibitors and ca2+ channel blockers
2. **Diabetes:** diuretics, ACE inhibitors, ARBs ca2+ channel blockers
3. **Recurrent stroke:** diuretics and ACE inhibitors
4. **Heart failure:** diuretics, B- blockers, ACE inhibitors ARBs Aldosterone receptor antagonist
5. **Previous myocardial infarction:** B- blockers, ACE inhibitors aldosterone antagonist
6. **Chronic renal disease**: ACE inhibitors ARBs

 **COMBINATION TO BE AVOIDED**

 **COMBINATION POSSIBLE EFFECTS**

|  |  |
| --- | --- |
| 1. an alpha or beta adrenergic blocker with clonidine
 | Apparent antagonism of clodine action has been observed  |
| 1. hydralazine with a dihydropyridine or prazosin
 | Hemodynamic action  |
| 1. verapamil or diltiazem with beta blockers
 | Bradycardia A-V block  |
| 1. methyldopa with clonidine or any two drugs of the same class
 |  |

 **ANTI HYPERTENSIVE AND PREGNANCY**

**ANTI HYPRTENSIVE TO BE AVIODED DURING ANTIHYPERTENSIVE FOUND SAFER DURING**

**PREGNANCY PREGNANCY**

|  |  |
| --- | --- |
| 1. ACE inhibitors, ARBs; risk of foetal damage and growth retardation
 | Hydralazine Methyldopa  |
| 1. **Diuretics; increase risk of foetal wastage placental infarcts**
 | **Dihydropyridine CCBs ; if ued should be discontinued before labour as its weaken contraction**  |

**ANTI ULCER DRUGS** 'Antiulcer drugs are a class of drugs, exclusive of the antibacterial agents, used to treat ulcers in the stomach and the upper part of the small intestine.

**Prescription:** The doses of the proton pump inhibitors and H-2 receptor blockers vary depending on the drug and condition being treated. Consult individual references.

The dose of sucralfate for acute ulcer therapy is 1 gram four times a day. After the ulcer has healed, maintenance treatment may continue at 1 gram two times daily

**Interaction**s

Proton pump inhibitors may increase the pH of the stomach. This will inactivate some antifungal drugs that require an acid medium for effectiveness, notable itraconazole and ketoconazole.

H-2 receptor blocking agents have a large number of drug interactions.

**Medications can include**:

* **Antibiotic medications to kill H. pylori.** If H. pylori is found in your digestive tract, your doctor may recommend a combination of antibiotics to kill the bacterium. These may include amoxicillin (Amoxil), clarithromycin (Biaxin), metronidazole (Flagyl), tinidazole (Tindamax), tetracycline (Tetracycline HCL) and levofloxacin (Levaquin).

The antibiotics used will be determined by where you live and current antibiotic resistance rates. You'll likely need to take antibiotics for two weeks, as well as additional medications to reduce stomach acid, including a proton pump inhibitor and possibly bismuth subsalicylate (Pepto-Bismol).

* **Medications that block acid production and promote healing.** Proton pump inhibitors — also called PPIs — reduce stomach acid by blocking the action of the parts of cells that produce acid. These drugs include the prescription and over-the-counter medications omeprazole (Prilosec), lansoprazole (Prevacid), rabeprazole (Aciphex), esomeprazole (Nexium) and pantoprazole (Protonix).

Long-term use of proton pump inhibitors, particularly at high doses, may increase your risk of hip, wrist and spine fracture. Ask your doctor whether a calcium supplement may reduce this risk.

* **Medications to reduce acid production.** Acid blockers — also called histamine (H-2) blockers — reduce the amount of stomach acid released into your digestive tract, which relieves ulcer pain and encourages healing.

Available by prescription or over-the-counter, acid blockers include the medications famotidine (Pepcid), cimetidine (Tagamet HB) and nizatidine (Axid AR).

* **Antacids that neutralize stomach acid.** Your doctor may include an antacid in your drug regimen. Antacids neutralize existing stomach acid and can provide rapid pain relief. Side effects can include constipation or diarrhea, depending on the main ingredients.

Antacids can provide symptom relief, but generally aren't used to heal your ulcer.

* **Medications that protect the lining of your stomach and small intestine.** In some cases, your doctor may prescribe medications called cytoprotective agents that help protect the tissues that line your stomach and small intestine.

**Anti-histamines**

By blocking the effects of histamines, this class of drugs can treat allergies and many other ailments.

An antihistamine is a type of medicine used to treat common [allergy symptoms](https://www.everydayhealth.com/allergies/symptoms/), such as sneezing

 **common antihistamines include:**

* Allegra (fexofenadine)
* Astelin and Astepro (azelastine) nasal sprays
* Atarax and Vistaril (hydroxyzine)
* Benadryl (diphenhydramine)
* Chlor-Trimeton (chlorpheniramine)
* Clarinex (desloratadine)
* Claritin and Alavert (loratadine)
* Cyproheptadine

**Antihistamine Side Effects**

* Common side effects of antihistamines include:
* Drowsiness or sleepiness
* Dizziness
* Dry mouth, nose, or throat
* Increased appetite and weight gain
* Upset stomach
* Thickening of mucus
* Changes in vision

**Antihistamine Precautions**

Before taking an antihistamine, tell your doctor about all medical conditions you have, especially:

* Diabetes
* An overactive thyroid ([hyperthyroidism](https://www.everydayhealth.com/hyperthyroidism/guide/))
* Heart disease
* [High blood pressure](https://www.everydayhealth.com/high-blood-pressure/guide/)
* Glaucoma
* [Epilepsy](https://www.everydayhealth.com/epilepsy/guide/) (seizure disorder)
* An enlarged [prostate](https://www.everydayhealth.com/prostate-cancer/guide/prostate/) or trouble urinating

**Chapter 4**

**CONCLUSION**

My experience at the palmer’s hospital was a wonderful and memorable one, I got to grow both academically and social. It gave a good experience on how working when I’m done with school would look like.

It prompted my knowledge on practical application of the theoretical skills acquired, it also prepared me against the professional challenges in the future

**References**

Document from things taught at the hospital by Dr. ibekwe okam.