**REPORT ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)**

**UNDERTAKEN AT MOPHETH PHARMACY**

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**LEKKI PHASE 1, LAGOS, NIGERIA.**

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**CERTIFICATION**

This is to certify that this work was undertaken by NWABINELI DAISY CHINWOKE (18/MHS07/055) at Mopheth Pharmacy and supervised by Pharm. Owoyemi Toyin with the report presented to the Department of Pharmacology, Afe Babalola University, Ado-Ekiti, Nigeria during the 2018/2019 Student Industrial Work Experience Scheme (SIWES).

Dr Ajayi Signature & Date

Supervisor

Dr Adeoluwa Olusegun Signature & Date

Head of Department

**DEDICATION**

I dedicate this work to my parents, who has given me so much encouragement and drive all throughout the days of my life.

To my sisters who have inspired me, and given me the guidance I need in every aspect of my life.

To my brothers who have be my stronghold and strength to move on.

To God who saw me through.

**ACKNOWLEDGEMENT**

Firstly, I want to appreciate God for seeing me through the completion of this project. I would also want to acknowledge my colleagues at the office I worked at, Pharm Ogbaeshire, Pharm Victoria, Mr. Ibukun and they rest who helped me through my SIWES experience.

In addition, to my Supervisor, Dr Ajayi, who came to see my working progress and encouraged me to keep up the good work.

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**CHAPTER ONE**

**1.1 INTRODUCTION**

 **1.1.1 ABOUT MOPHETH PHARMACY**

Mopheth Group is a Nigerian organization unique in her divine foundation with a world class culture. At Mopheth, we do not believe in just providing the best of services and products, we believe in building a workforce that is highly professional and of international standard. We are an organization with a coherent corporate culture that promotes efficiency and profitability. We understand the meaning of our values and translate them into actions that surpass the expectation of all our stakeholders. Particularly we have taken it upon ourselves to be the dependable organization that keeps striving for excellence in all our activities.

- As a dynamic organization that is destined for greatness, Mopheth has some believes that are irrevocable and constitutes the foundation of Mopheth. All staffs should bear this in mind when carrying out their various duties.

**2 CHAPTER TWO**

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**2.1 PAIN MEDICATION**

Pain medications are drugs used to relieve discomfort associated with disease, injury, or surgery. Because the pain process is complex, there are many types of pain drugs that provide relief by acting through a variety of physiological mechanisms. They act by mimicking the actions of endogenous opioid peptides by interacting with mu, delta or kappa opioid receptors. The opioid receptors are coupled to G1 proteins and the actions of the opioids are mainly inhibitory. They close N-type voltage-operated calcium channels and open calcium-dependent inwardly-rectifying potassium channels. This results in hyperpolarization and a reduction in neuronal excitability. They also decrease intracellular cAMP which modulates the release of nociceptive neurotransmitters (e.g. substance P). Inhibition of prostaglandin synthesis by cyclooxygenase is the principal mode of the analgesic and anti-inflammatory actions of NSAIDs. The widespread inhibition of cyclo-oxygenase is responsible for many of the adverse effects of these drugs. NSAIDs also reduce prostaglandin production within the CNS. Thus, effective medication for one will likely have a different mechanism of action than another pain medication.

**Types of pain medication**
• Nonsteroidal anti-inflammatory drugs (NSAIDs) act on substances in the body that can cause inflammation, pain and fever. Side effects include; risk of gastrointestinal ulceration and bleeding, the possibility of severe and deadly vascular problems with long-term use, including heart attack and stroke.
• Corticosteroids are often administered as an injection at the site of musculoskeletal injuries. They exert powerful anti-inflammatory effects. They can also be taken orally to relieve pain from, for example, arthritis. Side effects include; elevated blood pressure, elevated blood sugar, fluid retention, gastrointestinal bleeding, osteoporosis, damage to local tissues
• Acetaminophen increases the body's pain threshold, but it has little effect on inflammation. Patients experience few, if any, side effects, causes liver damage if taken excessively taken with alcohol.
• Opioids, also known as narcotic analgesics, modify pain messages in the brain. Side effects include; drowsiness, dizziness, respiratory depression, constipation, addiction or dependence, euphoria, dysphoria, agitation, seizures, hallucinations, lowered blood pressure and heart rate, muscular rigidity and contractions, nausea and vomiting, pupil constriction, sexual dysfunction, urinary retention.
• Muscle relaxants reduce pain from tense muscle groups, most likely through sedative action in the central nervous system. Side effects include; drowsiness, dependence, dry mouth, constipation, confusion, and loss of balance, discolors the urine to green, brown, or black.
• Anti-anxiety drugs work on pain in three ways: they reduce anxiety, they relax muscles, and they help patients cope with discomfort. Side effect include; sedation, psychological changes, headache, nausea, visual problems, restlessness, nightmares, chest pain and heart pounding.
• Some antidepressants, particularly the tricyclics, may reduce pain transmission through the spinal cord. Side effects include; Dry mouth, difficulty urinating, blurred vision, constipation, lower blood pressure, fast heartbeat, palpitations, weight gain, fatigue, ejaculatory difficulties, insomnia, nausea
• Some anticonvulsant drugs also relieve the pain of neuropathies, possibly by stabilizing nerve cells. Side effects include; Dizziness, drowsiness, and swelling of the lower extremities.

Supplements that aid anti inflammatory, pain management and treatment
Glucosamine, Chondroitin, Caffeine,Omega-3 fatty acids, Probiotics, Vitamin B12

**2.2 COLD AND COUGH MEDICATION**

Cough and cold medication are drugs used treatment of the respiratory tract infections. There’s no cure for the common cold, the best thing you can do is ease the symptoms, these over-the-counter (OTC) drugs can help with many different symptoms.
Active ingredients
**Analgesics**: Help reduce the different types of pain brought on by the common cold, such as: muscle aches, headaches, sore throat, earaches. These include acetaminophen and the non-steroidal anti-inflammatory drugs (NSAIDs) aspirin, ibuprofen, and naproxen sodium.
**Decongestants**: These are for nose and chest congestion. Nasal decongestants help unclog a congested nose. They work by narrowing the blood vessels in the lining of your nose so that the swollen tissue shrinks and decreases mucous production. Air can then pass through more easily. Nasal decongestants are available as pills, nasal sprays, and liquid drops. Generally, they aren’t recommended for children who are 3 years or younger.
E.g. Pseudoephedrine, Phenylephrine, Oxymetazoline
**Expectorants**: These loosen or thin the mucus in the chest, making it easier to cough it up. This helps your body rid itself of excessive mucus more quickly. E.g. guaifenesin. Drinking extra fluids helps.
**Antihistamines**: Antihistamines block the release of histamine, which is a natural substance our bodies release when we’re exposed to allergens. Antihistamines may provide some relief of symptoms related to the release of histamine in your body. These can include: sneezing, itchy ears and eyes, watery eyes, coughing, nasal discharge
They include chlorpheniramine maleate, diphenhydramine, and doxylamine succinate.
**Cough suppressants**: These block the cough reflex, making coughing less likely. Coughing protects the body by expelling unwanted mucus, microbes, and air, the urge to cough is a reflex and can sometimes be triggered unnecessarily. Cough suppressants help if a cough is interfering with your daily life or sleep. It is recommended taking cough suppressants at bedtime.
These drugs work by blocking the nerve impulse that causes your cough reflex, providing short-term relief from coughing. E.g. dextromethorphan.
Cough suppressants should not be used if the cough is caused by smoking, emphysema, asthma, pneumonia, or chronic bronchitis, because coughing helps to clear the lungs.
Antihistamines or decongestants can also dry the throat, making the mucus thicker and harder to move, resulting in a more severe cough.
**Combination medicines**: These contain more than one of these ingredients, and they treat more than one symptom.

**2.3 ANTIBIOTICS**

Antibiotics are a group of medicines that are used to treat infections. They do this by killing the bacteria or by keeping them from copying themselves or reproducing.
Antibiotics are sometimes called antibacterials or antimicrobials. Antibiotics can be taken by mouth as liquids, tablets, or capsules, or they can be given by injection. Usually, people who need to have an antibiotic by injection are in hospital because they have a severe infection. Antibiotics are also available as creams, ointments, or lotions to apply to the skin to treat certain skin infections. Antibiotics only work against infections that are caused by bacteria and certain parasites. Antibiotics do not work against infections that are caused by viruses or fungi or fungal infections of the skin.
Occasionally, a viral infection or minor bacterial infection develops into a more serious secondary bacterial infection. In this case, antibiotics would be needed.
There are various antibiotics available, antibiotics are usually grouped together based on how they work. Each type of antibiotic only works against certain types of bacteria or parasites. This is why different antibiotics are used to treat different types of infection. The main types of antibiotics include:

* Penicillins - phenoxymethylpenicillin, flucloxacillin and amoxicillin
* Cephalosporins - cefaclor, cefadroxil and cephalexin
* Tetracyclines - tetracycline, doxycycline and lymecycline
* Aminoglycosides - gentamicin and tobramycin
* Macrolides - erythromycin, azithromycin and clarithromycin
* Clindamycin
* Sulfonamides and trimethoprim - co-trimoxazole
* Metronidazole and tinidazole.
* Quinolones - ciprofloxacin, levofloxacin and norfloxacin.
* Nitrofurantoin - used for urinary infections.

There are a number of other antibiotics prescribed for more uncommon infections such as tuberculosis etc.
It is important to take antibiotics in the correct way. If not the effectiveness will be reduced. If an antibiotic is stopped in mid-course, germs (bacteria) may be partially treated and not completely killed. Bacteria may then develop resistance to that antibiotic.
Overuse of antibiotics has led to bacteria changing their form or structure (mutating) and becoming resistant to some antibiotics.
Side-effects:
Severe watery diarrhoea and abdominal cramps, shortness of breath, hives, rash, swelling (of the lips, face, or tongue), fainting, vaginal itching or discharge(vaginal thrush), white patches on the tongue (oral thrush), vomiting.
Some antibiotics may interact with other medicines that you might take. This may cause reactions, or reduce the effectiveness of one or other of the treatments.

* It is advised to take probiotics to replenish lost good bacteria after antibiotics treatment.

**CHAPTER THREE**

**3.1 SERVICE RENDERED**

1. Basic customer service skills
2. Measurement and packaging of drugs
3. Collection of payment fees from customers
4. Administration of some medications
5. Perfoming basic test (taking patients blood pressure, weight and blood sugar)
6. Consulting with patients and directing them on how to take their medications and advising patients how to better manage their health conditions

**3.2 SAFETY IN THE WORK ENVIRONMENT**

 Safety is the process of carrying out any work operation or activities carefully in such a way to prevent any form of accident or hazard. It is a state of being "safe". Safety can also be defined as the control of recognized hazards to achieve an acceptable level of risk. Working with patients can expose you to biological and chemical hazards and cause harm to the body and the immune system. However, you can take simple precautions when working with such patients to significantly reduce the risks.

**3.3 CHALLENGES ENCOUNTERED**

1. It was not easy securing a placement because most industries wanted one year industrial attachés.
2. It was difficult to learn the drugs in the pharmacist, their use and their arrangement.
3. Due of the lack of enough experience the clients weren’t always comfortable allowing the IT students to attend to them.

**3.4 CONCLUSION**

The following are the conclusion drawn after the successful completion of SIWES;

1. It gave me the opportunity to apply knowledge in real work.

2. It gave me the opportunity to learn about drugs and how they are maintained in the pharmacy.

3. It exposed me to work methods not taught in the university and provided access to products equipment not available in the university as well as assessing students’ interest in the occupation he/she plans to undertake.

4. It promoted my knowledge on the risk and hazard associating with the use of mediction.

5. It promoted my knowledge on practical application of the skills acquired.

6. It also prepared me against the professional challenges in the future.

7. The programme was helpful in exposing me to the importance of the use of medicine and how they are effectively applied to our daily lives.

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