Drug Review and Analysis Paper

[Author Name(s), First M. Last, Omit Titles and Degrees]

[Institutional Affiliation(s)]

Author Note

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# Part 1

**Medication Table** (Wilson, Shields, Shannon, & Liebrecht, 2018)

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| --- | --- | --- |
| **Brand & generic names** | **Dose/ route/ frequency** | **Therapeutic class (TC) &****Pharmacologic class (PC)** |
| Hydrodiuril/hydrocholorothiazide | 12.5 mg PO daily | **Therapeutic Classification:** Diuretic, antihypertensive**Pharmacologic Class**: Diuretic (thiazide) |
| Hytrin/terazosin | 5 mg PO daily | **Therapeutic classification:** antihypertensive**Pharmacologic classification:** alpha1-adrenergic blocker |
| Lyrica/pregabalin | 75 mg PO Daily | **Therapeutic Class:** Neuropathic Pain Agent**Pharmacologic Class**: Alpha-2 delta ligand |
| Mobic/meloxicam | 7.5 mg PO Daily | **Therapeutic Class**: Analgesic**Pharmacologic Class**: enolic acid NSAID (oxicam) |
| K-Dur/potassium chloride | 2 mEQ PO Daily | **Pharmacologic classification**: potassium supplement |
| Bayer’s Aspirin/aspirin | 81 mg PO Daily | **Therapeutic classification**: nonnarcotic analgesic, antipyretic, anti-inflammatory, antiplatelet**Pharmacologic Class**: salicylate and a nonsteroidal anti-inflammatory drug (NSAID) |
| Nascobal/vitamin B-12 | 2000 mcg PO daily | **Therapeutic Class**: Nutritive Agent**Pharmacologic Class**: Vitamin B |
| One-A-Day (Men’s)/multivitamin | 1 tablet PO daily | **Pharmacologic classification**: Multivitamin |

# Part 2

# Analysis

## Analysis of the patient’s drug regimen

Hydrodiuril/ hydrocholorothiazide is primarily used to treat high blood pressure, which helps prevent strokes, kidney problems, and heart attacks. Furthermore, being a diuretic, it causes the body to make more urine and helps it get rid of excess salt and water (Herman & Bashir, 2019). Furthermore, daily recommended dosage is well within the oral dosage recommendation for an adult i.e. 12.5 to 25 mg PO once daily.

Hytrin/ terazosin is also used to treat hypertension i.e. high blood pressure and helps prevent heart attacks, strokes and kidney problems. It relaxes the blood vessels, allowing blood to flow freely. It also helps with benign prostatic hyperplasia-BPH by relaxing the muscles in the prostate and part of the bladder (Davis & Oparil, 2018). Since it helps with hypertension, taking too much can cause a sudden decrease in blood pressure, fainting or dizziness. Thus, it is often recommended to start at a low dose, and then increase the dose administered to the patient. Since the patient in question has been using the medication for a while, 5 mg PO is perfectly safe for the patient.

Lyrica/ pregabalin is used to treat pain caused as a result of nerve damage, and even certain types of seizures (Thompson, Morey, & Griffiths, 2019). The patient has been recommended to take 75 mg of the medicine, orally every day, which is the recommended dose for an adult.

Mobic/ meloxicam is primarily used to treat arthritis. It has been used regularly by patients to reduce pain, swelling, and stiffness of the joints (Bekker, Kloepping, & Collingwood, 2018). It belongs to a class of drugs known as the non-steroidal anti-inflammatory drug (NSAID). Additionally, this medication may raise your blood pressure. Since the patient is already on hypertension medication, the adverse effects of the medication can be dealt with.

K-Dur/ potassium chloride is a well-known mineral supplement that is used to treat or, in some cases, prevent low amounts of potassium in the blood (Harding & Snyder, 2018). A normal level of potassium in the blood is important, given the number of procedures the patient has been put through, potassium supplement is recommended. Furthermore, since the patient is on diuretics, which results in frequent urination (Herman & Bashir, 2019), potassium supplements are needed to maintain the body’s potassium levels. The dosage of 2 mEQ PO Daily is the recommended dose of patients that are taking a diuretic on a regular basis.

Bayer’s Aspirin/ aspirin is used to reduce fever and relieve pain especially in rather common conditions, which includes muscle aches, toothaches, common cold, and headaches. It may also be used to reduce pain and swelling in conditions such as arthritis and even low doses of the medicine has been documented to prevent blood clots in patients at the risk of a stroke or heart attack (Abdelaziz et al., 2019; Montinari, Minelli, & De Caterina, 2018), which is why it had been prescribed to this patient. The dose of 81 mg PO Daily is the recommended dose for adults between the ages of 40 and 70.

Nascobal/ vitamin B-12, also called Cyanocobalamin is a man-made form of vitamin B12 used to treat deficiency of this particular vitamin in a patient’s bloodstream. Vitamin B12 helps the body convert stored fat and carbohydrates to make new protein. It is also important for normal blood, cells, and nerves (Feller, Sutterer, & Fleming, 2019). Thus, it had been recommended to the patient in a dose of 2000 mcg PO daily, which is the recommended dose of the patient such as the one it has been prescribed to. Additionally, it may cause a decrease in the levels of potassium in the patient’s bloodstream, thus the patient under discussion has been prescribed to take K-Dur/ potassium chloride on a regular basis as well. Thus, it is relatively safe for the patient to use.

One-A-Day (Men’s)/ multivitamin is an essential multivitamin that is exclusively designed for men. It replenishes a number of very important nutrients within the bloodstream, such as thiamine, niacin, biotin, calcium, magnesium and vitamins A, E and K. The recommended dose i.e. one vitamin a day is more than enough for the patient’s wellbeing.

## Potential medication reactions according to Beer’s List for geriatric patients

According to Beer’s list for geriatric patients, there are a few prescription drugs recommended to Mr. H that should be given a second thought. The first one is peripheral Alpha-1 Blockers Doxazosin Prazosin Terazosin i.e. Hytrin. It is not recommended as a routine treatment for hypertension. Thus, alternatives should be considered. Additionally, the dose of pregabalin i.e. Lyrica recommended by the doctors should be kept to a bare minimum, according to the needs of the patient. Mobic or meloxicam, according to Beer’s list, increase the possibility of gastrointestinal bleeding or peptic ulcer disease, especially in patients above 75. Thus, chronic use is recommended to be avoided and alternative medication should also be considered.

## Analysis of potentially unsafe food and drug interaction

Most of the medication recommended to the patient by the name of Hydrodiuril/ hydrocholorothiazide may result in negative interactions with dofetilide and lithium, both of which are not recommended to the patient. Thus, it is safe for the patient to take regularly. Hytrin/ terazosin may have negative interactions with verapamil, tizandine, MAOIs, and some type-5 inhibitors, which are not recommended to the patient. Thus, it should not have any and all adverse effects on the patient.

There is an extensive list of prescription drugs that can cause an adverse interaction with Lyrica/ pregabalin. That includes orlistat. Since orlistat has not been recommended to the patient, it is safe to consume. Mobic/ meloxicam is another drug which has negative interactions with other prescription drugs. However, none of them are being taken by the patient at the moment.

K-Dur/ potassium chloride, a well-known mineral supplement, may work adversely and produce a negative interaction when taken with other products that are also meant to raise the level of potassium in your blood. A few of these prescription drugs include eplerenone, ACE inhibitors such as enalapril/lisinopril, angiotensin receptor blockers, such as losartan/valsartan, spironolactone/triamterene, among others.

Bayer’s Aspirin/ aspirin, also prescribed to the patient, can have an adverse effect on the patient when taken with certain NSAIDs and antiplatelets. Thus, none of those medication has been recommended to the patient. Nascobal/ vitamin B-12 as well as One-A-Day (Men’s)/ multivitamin are both essential vitamins and are safe to use with just about all kinds of prescription drugs.

## Knowledge required for self-administration of prescribed medication

Most of the medication prescribed to the patient is to be taken orally. Thus, there are a few things that the patients need to be mindful of while taking the prescribed medication are as follows (Gborogen & Polek, 2018):

* Make sure that the proper dose of medicine is needed at the proper time.
* The patient should be made aware of why this particular medicine is being taken and how.
* The medicine should be taken with a full glass of water i.e. 8 ounces or 240 milliliters unless directed otherwise by the doctor.
* The patient should not lie down for at least 10 minutes after taking the medication.
* Do not chew or crush tablets or capsules. It can release all of the drugs at once and can also increase the related side effects of the drug.
* Do not take prescription drugs after the recommended period of time.

However, most of these drugs have an associated list of side effects that may be faced by the patient in certain situations. In case the patients suffer from any of the known drug-related side effects, he should get in touch with an MD immediately.

## Assessment for the achievement of medicine’s therapeutic outcomes

The patient, by the name of Mr. H, 76 years of age, suffered from a number of illnesses which included hypertension (HTN), chronic back pain, optic migraines, benign prostate hypertrophy (BPH) with urinary obstruction and other lower urinary tract symptoms (LUTS), and macular degeneration. He even had a history of a number of medical surgeries performed and he also sees his primary care physician on a regular basis i.e. every six months. According to him, he does not have any food or drug related allergies and drinks two cups of coffee a day. Based on that assessment, the medication prescribed to him should:

* Elevate his hypertension courtesy of Hytrin.
* Maintain blood potassium level, which is reduced as a result of using HydroDIURIL.
* Hydrodiuril can also help with benign prostate hypertrophy (BPH) with urinary tract obstruction, a condition that makes harder to urinate properly since it is a diuretic.
* Lyrica for nerve related pain as a result of muscle regeneration.
* Mobic and Bayer’s Aspirin can help with Mr. H’s chronic back pain and optic migraines.

The best assessment of the prescribed medication can be seen from the results they perform. If they help the patient heal and improve his quality of life, they are doing exactly what they were meant to do.

## Assessment of indications reflecting the adverse effect of medication

The side effects of Hydrodiuril/ hydrochlorothiazide are upset stomach, headache, and dizziness. On the other hand, the side effects of Hytrin/ terazosin are lightheadedness, dizziness, nausea, tiredness, drowsiness, headache, blurred vision or even stuffy nose. The list of side effects that can occur as a result of using Lyrica/ pregabalin is drowsiness, dizziness, dry mouth, constipation, difficulty concentrating, swollen arms/legs, and weight gain. Another drug taken by the patient is Mobic/ meloxicam. Stomach upset, nausea, dizziness, or diarrhea may occur as known side effects of this drug. The possible side effects of using K-Dur/ potassium chloride include upset stomach, nausea, vomiting, gas, or diarrhea. The aspirin taken by the patient has its very own set of side effects as well. The possible side effects of taking this medication include heartburn or upset stomach. The downside of taking Nascobal results in headache, nausea, or runny nose may occur as possible side effects.

Most of the prescribed medication has a common set of side effects, i.e. dizziness, nausea, headache and in some cases stuffy nose. The downside of taking the prescribed medication, despite the patient’s age, can be mitigated through proper diet, proper intake of medication, regular visits to the doctor and exercise, the negative implications of the drugs can be assessed and kept at bay.

## Suggestions for cost-effective drug therapy

When a patient is prescribed such as an extensive list of drugs to take on a regular basis, despite patients’ medication being covered by insurance, as in the case of Mr. H. Thus, cost-effective therapy is an incredible method to improve the present healthcare system. A few measures that can be taken are:

* Use of generic medication as opposed to brand name medication. They tend to not only be costly, but they aren’t as easily available as well.
* Discuss alternative formulations of your prescribed medication, especially if the one prescribed by your doctor is not as cost effective.
* Choose pharmacies which are covered by your insurance plan.
* Use coupons where possible.
* Make use of patient assistant plans available at the hospital and online.

# Part 3

# The Teaching Plan

## Priority Nursing Diagnosis

NANDA is a diagnostic system that was created for the purpose of identifying the needs of the patient, especially the ones that fall under the scope of nursing. It includes the actual or potential health problems that the nurse is licensed and competent to treat. A written nursing diagnostic statement is written in three parts. It describes the health status of a patient and the factors that contributed to the current status. It follows the common format when writing or formulating nursing diagnosis is the PES format. An example illustrating how nursing diagnostics statements is:

One-Part: Readiness for enhanced breastfeeding.

Two-Part: Risk for infection related to compromised host defenses.

Three-Part: Impaired physical mobility related to decreased muscle control as evidenced by the inability to control the lower body.

## Expected learning outcomes

## The five stages of the nursing process are assessment, diagnosing, planning, implementation, and evaluation. In the diagnostic process, the nurse is required to have critical thinking. It includes;

* Assessment i.e. collection of data regarding the patient. General observation and family history are included here.
* Diagnosis i.e. the problem at hand using the details assessed.
* Planning. Coupled with the medical staff, the way to manage the problem is sought out and implemented.
* Implementation includes putting the planned means of aid to the patient in an effective manner.
* Evaluate the work done and assess if the patient is feeling any better.

## Method of teaching and Visual Aids Used

Outcomes-based higher education coupled with clinical teaching style is the best method of teaching that can be employed in medical schooling. It puts aspiring professionals in close vicinity of master teachers and professional so that they can communicate their knowledge of the subject. It is done through nursing clinics, clinical rounds, clinical care conferences along with the process of recording and teaching. Hands-on practices are the best visual aids one can use in this type of learning.

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