NR 565 Week 1 Collaboration Cafe; CPGs RELATED TO PRESCRIBING MEDICATION

Hypertension

1. Briefly summarize the condition you selected and your rationale.

Hypertension is a condition in the circulatory system which affects the arteries. It presents as a blockage or narrowing of the arteries. This causes the heart to work harder to pump blood throughout the body. Hypertensive processes involve multiple organ systems and numerous independent and interdependent mechanisms, with the kidney contributing and being the target organ. Obesity, genetics, activation of the sympathetic nervous system, weakened rection of renin-angiotensin-aldosterone, neurohormonal systems, and a high sodium diet result in expansion volume. Increased peripheral resistance and afterload result from these changes, which cause high blood pressure. Signs and Symptoms of hypertension include a high blood pressure reading greater than 140/90 mmHg, dizziness, blurred vision, headaches, chest pain, palpitations, nausea, vomiting, and shortness of breath. Patients with hypertension are usually diagnosed with hypertension based on a constantly high blood pressure reading. Hypertension is a significant risk factor for cardiovascular diseases, which are among the most frequent causes of death worldwide and affect patient health outcomes (CDC, 2023). Hypertension has significant effects that lead to high morbidity, mortality rates, and financial costs. According to Kumar et al. (2019), hospital readmissions are usually seen among patients with severe and uncontrolled hypertension. Therefore, this issue must be addressed to target and lessen the burden of readmissions of patients with severe hypertension that may impact not only the person's quality of life but also healthcare costs. The prevention and control of hypertension is essential to reducing the burden of cardiovascular diseases. This major contributor to cardiovascular disease can be prevented, delayed, and easily treated. However, despite what is possible, the prevalence and control of hypertension continue to be at a high level in the United States.

2. Describe the prescribing recommendations from the CPG and how these could impact pediatric, pregnant, and older adult populations considering pharmacokinetic principles.

During the first trimester of pregnancy, blood pressure declines and rises slowly as the pregnancy progresses. The management of hypertension is very critical because it involves four aspects, which include the newly pregnant mother with existing hypertension, incident hypertension, preeclampsia, and severe hypertension. Preeclampsia requires adequate and immediate treatment to prevent stroke, heart failure, and adverse fetal outcomes. Preeclampsia is a harmful condition for a pregnant woman and her fetus because there is an increased risk of preterm delivery, intrauterine growth restriction, placental abruption, and perinatal mortality, and it is more likely to occur in the first pregnancy (Whelton et al., 2018). According to the Clinical Practice Guideline (2018), the prescribing recommendation for women with hypertension who become pregnant or are planning to become pregnant is to transition to methyldopa, nifedipine, and labetalol during pregnancy. Women with hypertension who become pregnant should not be treated with ACE inhibitors, ARBs, or direct renin inhibitors. The management of blood pressure during pregnancy is complicated because the commonly prescribed antihypertensive