

## Week 3

# Clinical Decision-Making Discussion

**A 68-year-old male with a history of hypertension presents to the Emergency Department with 3 days of worsening headache. He is currently taking HCTZ 25mg daily. Blood pressure on arrival is 220/112. HR 100. No chest pain, no shortness of breath, no abdominal pain. No illness or fever. His neurological exam is normal. Identify the medications (dose, route, frequency) you would order for this patient. Explain your rationale for each agent prescribed.**

Hypertension is the most common cardiovascular disease process in adults and is associated with significant morbidity and mortality. Optimal blood pressure targeting continues to be the goal in facilitating cardiovascular as well as end-organ health. As future Nurse Practitioners caring for the adult and gerontology population, this area of care will continue to be a mainstay of our practice.

In this case, the patient presents to the ER in what should be considered in hypertensive crisis/urgency due to a blood pressure of 220/112 and worsening headache for the past 3 days. The patient has been previously diagnosed and treated for hypertension through monotherapy of Hydrochlorothiazide (HCTZ) 25 mg once a day. Although symptoms are denied by the patient except for the worsening headache, concern should be addressed for potential risk of target organ damage such as intracerebral hemorrhage, cardiovascular injury/compromise, or renal damage. Additional diagnostics such as head/brain CT, 12-lead ECG, chest x-ray, and blood chemistry including renal and cardiac markers should be performed.

Immediate treatment should be initiated through the use of intravenous antihypertensive medications in order to achieve rapid control of blood pressure. The therapeutic goal is to achieve reasonable blood pressure control through rapid acting intravenous pharmacological agents, then to transition over to oral antihypertensives for home and long-term blood pressure management. A rapid reduction in blood pressure is normally not indicated except in emergent cases such as aortic dissection (Vanderah, 2024). In most cases, it is found that a rapid reduction in blood pressure to normal levels has been found not to improve outcomes of mortality or severe bodily injury and may lead to hypoperfusion of end organs (Vanderah, 2024).

In this specific case, the initial first line pharmacological treatment to gain immediate control of blood pressure would be through the use of Nicardipine or Labetalol according to the 2020 ISH Global Hypertension Practice Guidelines: