**Use a synthesis of research study evidence and non-research evidence to introduce the implications of the practice problem, including its significance, mortality, and economic ramifications.**

Finding medication for mental health patients has often been known to be complicated. Some patients state that they feel like they are being experimented on with different types of medications. Some patients will become non-compliant with their mental health medications due to not being able to find the proper medication that works for their DNA. Each person is different, and not every patient meets a textbook diagnosis. According to Guinart et al. (2022), when it comes to adherence to psychiatric medication force, severe mental illnesses improve the patient's outcome, but only for as long as the patient is adherent to the medications. It has been reported that adherence to psychiatric medications for schizophrenia and bipolar disorder is an average of 40% to 50% (Guinart et al., 2022). That leaves at least 60-50% of patients with schizophrenia or bipolar not appropriately treated. Depression disorder has an even lower rate of adherence of 21% still taking medications after 12 months (Guinart et al., 2022).

Unfortunately, when patients are on medication, nonadherence when it comes to mental health has been associated with an increased risk of relapse, violence, and legal problems, increased suicidal attempts, increased use of emergency services, and poor social and occupational functioning (Guinart et al., 2022). According to Noland et al. (2022), on investigation of mental health offenders in the prison system, they were often found to reoffend or offend for the first time due to deciding to take their medications no longer. When offenders are not on their correct medicines, they will often choose not to take the medication at all. The patient needs to feel some sort of improvement in their mental health to be committed to taking the medicines daily. The patient also needs to be reminded that they feel mentally better due to the medication, and if they just stop the medication, there could be a rebound effect, or they will return to the previous status. According to the Substance Abuse and Mental Health Service Administration (2022), it is estimated that 18% of the general population has been diagnosed with some form of mental illness. However, an estimated 44% of those in jail and 37% of those in prison have mental health illnesses of some form (SAMHSA, 2022). We must get a patient on the correct medication as soon as possible to help prevent any complications within their community.

Present your practice change idea to address your practice problem.

A practice change idea to address medication compliance can be found in pharmacogenomic testing. Pharmacogenomic testing has been getting increased attention to make personalized medication selections for patients (Oslin et al., 2022). Pharmacogenomic testing can focus on the variation in the genes that encode the hepatic cytochrome's P450 enzymes within the body (Oslin et al., 2022). The test results will often show how an individual metabolizes medication, which can be classified as poor, standard, intermediate, and rapid metabolizing (Oslin et al., 2022). According to Oslin et al. (2022), pharmacodynamics testing has been beneficial in the treatment of major depressive disorder, where an initial response to medication treatment can be expected in 28% to 33% of patients. If a DNP scholar uses pharmacogenomic testing, the patient will have better trust that the medication will work and that they are not just randomly given a