

## Available Pharmacology Economics Research Projects for TAMU MSRPP Medical Students

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My research interest lies at the intersection of science, medicine and economics to assess clinical, economic and humanistic values of healthcare interventions. She conducts research on evaluating the costs and outcomes associated with pharmaceutical products. My research uses clinical trial data, and large survey data to evaluate resource utilization, costs and outcomes associated with chronic diseases. Other studies model cost-effectiveness of cancer treatments and the economic burden of opioid misuse.

### **Cost-effectiveness of breast cancer treatments #oncology #cost-effectiveness**

Ribociclib, a cyclin D1/CDK4 and CDK6 inhibitor, is a novel medication for treating certain types of breast cancer. It was approved for use in pre- or perimenopausal woman with advanced breast cancer when used in combination with an aromatase inhibitor. Ribociclib has been shown to significantly extend progression-free survival and overall survival for patients based on results from randomized, controlled, phase 3 clinical trials. However, it is also associated with high costs. The cost of ribociclib alone can be over 10,000 for a 28-day treatment cycle. We have built a decision analytical model to assess the cost-effectiveness of ribociclib plus aromatase inhibitor as compared to the standard of care based on the survival benefits, quality of life, incidence of adverse events and also overall costs. Working on this project will give students opportunities to perform primary clinical literature review, conduct decision analysis modeling and help with manuscript writing.

### **Epidemiology and clinical features of Neonatal Abstinence Syndrome in Texas #opioids**

Neonatal Abstinence Syndrome (NAS) affects newborns due to maternal use of opioids during pregnancy, and has similar symptoms to opioids withdrawal. NAS incidences have increased in the last 10 years and have become a national issue associated with the opioid crisis. Minimal data regarding NAS epidemiologic, clinical and economic burden are currently available, especially for Texas. We have conducted database analysis to identify NAS cases using hospital data in Texas from 2006-2017. NAS incidence, clinical characteristics and resource utilization were analyzed. Working on this project will provide opportunities to conduct primary literature review, perform database management and analytics and help with manuscript writing.