**REPS Abstract**

**Title:** Re-Evaluation of Amiodarone use for Prevention of Post-Operative Atrial Fibrillation in Cardiac Surgery

**Authors:** Vincent Harris, PharmD, Allison Gaddy, PharmD, BCPS, Evan Tatum, PharmD, BCPS, CPP, Gerald Rebo, PharmD, BCPS, BCCCP, DPLA

**Practice site:**  Novant Health Presbyterian Medical Center and Novant Health Forsyth Medical Center

**Background:** Post-operative atrial fibrillation is a common complication after cardiac surgery. The occurrence of postoperative atrial fibrillation has a negative effect on mortality, morbidity, and hospital length of stay. Many pharmacotherapy options have been evaluated to prevent post-operative atrial fibrillation with varying outcomes. Amiodarone is one option that has been used with success in clinical trials. Still, its use can be associated with adverse reactions such as bradycardia, QTc prolongation, and drug-drug interactions. At Novant Health Presbyterian Medical Center, amiodarone is used to prevent post-operative atrial fibrillation.

**Objectives:** Evaluate the efficacy and safety of amiodarone to prevent post-operative atrial fibrillation in cardiac surgery patients

**Methods:**  The electronic medical record system was used to identify patients admitted to the cardiac surgery unit at Novant Health Presbyterian Medical Center who received amiodarone for postoperative atrial fibrillation prophylaxis compared to patients admitted to the cardiac surgery unit at Novant Health Forsyth Medical Center who did not receive amiodarone. A sample size of 390 patients was needed to provide 90% power to detect a 50% difference in the outcome of postoperative atrial fibrillation.

**Results:**  Post-operative atrial fibrillation occurred in 38.5% of patients who received amiodarone compared to 42% of patients who did not receive amiodarone (p=0.475). Bradycardia occurred in 24.5% of patients, elevated Liver Function Tests (LFTs) occurred in 7% of patients, and 2% of patients had a prolonged QTc with amiodarone use. 88.5% of patients received a medication that could potentially interact with amiodarone. Atorvastatin was the most common drug interaction observed.

**Conclusion:**  Amiodarone prophylaxis was tolerated from a safety standpoint but did not significantly reduce the incidence of postoperative atrial fibrillation.