A Pilot Study to Determine Barriers to ACE Inhibitor/ARB Prescriptions for Heart Failure Patients on Hospital Discharge

**Background:** Multiple clinical trials demonstrate the ability of ACE inhibitors (ACEI) to reduce mortality in heart failure patients. The CONSENSUS trial was the first to show 50% total reduction in mortality in patients with NYHA Class IV heart failure with the use of enalapril. As a follow up to CONSENSUS, enalapril proved to reduce relative mortality by 16% in heart failure patients in NYHA classes II and III. Furthermore, the VALIANT trial showed that an ARB could be equally effective to an ACEI in mortality reduction. Despite this evidence, practitioners are not prescribing according to ACC/AHA guidelines. The ADHERE trial found only 72% median ACEI prescribing across academic and non-academic hospitals. Given the evidence that ACEI reduce mortality in patients with a reduced left ventricular ejection fraction, an improvement in ACEI/ARB prescribing practices could help save lives.

**Specific Aim:** To describe barriers to guideline adherence in ACEI/ARB prescribing practices for congestive heart failure patients prior to discharge.

**Hypothesis:** Barriers will include medical contraindications, lack of knowledge of guidelines, concern about side, and concerns about medication compliance.

**Methods:** Patients with an admitting diagnosis of heart failure were selected from a daily list of inpatients on the medical service. A total of 52 eligible patients were identified and of these, eight were excluded. Five patients were excluded because the investigator was the attending of record. The remaining 3 were discharged in less than 24 hours before surveys could be placed in their charts. We intended to exclude patients on ionotropic therapy or with left ventricular assist devices but none were identified. After identification of a patient for a study, a survey sheet was placed in the patient’s chart to be completed by the attending physician on the day of discharge. This survey questioned physician and patient characteristics, ACE inhibitor/ARB prescriptions and knowledge regarding the ACC/AHA guidelines on ACEI/ARB use in congestive heart failure patients.

**Results:** The study was terminated prior to anticipated enrollment of 100 patients because of lack of response. Of 44 surveys placed in charts, only one (2.3%) was completed. Physicians who were surveyed included 28 (63.6%) generalists and 16 (36.4%) cardiologists. A generalist submitted the lone survey completed. There was insufficient data to analyze ACEI/ARB prescription barriers. However, the completed survey did note that the patient was not on an ACEI or ARB because of medication non-compliance.

**Conclusions:** Not enough surveys were returned to analyze barriers to prescribing ACEIs or ARBs in congestive heart failure patients. However, we can conclude from this study that attendings, both generalists and cardiologists, did not want to complete a survey on their prescribing practices. Two hypotheses can be made from this result: 1) Passive requests (i.e placing surveys in charts) for data acquisition from physician is not effective and may need to be supplemented by more active methods such as email, paging the physician, requesting face to face contact to complete the survey in an interview fashion and 2) Physicians do not want to participate in a project that may criticize their personal prescribing practices. In the future, to answer a hypothesis based on physician prescribing practices, a more interactive approach to obtain data would likely be more successful.