**Sex Differences in Admission Rates, Use of Anticoagulation and Outcomes for Emergency Department Presentations of Atrial Fibrillation**

**Background:** Studies in non-Emergency Department (ED) settings have shown women with non-valvular atrial fibrillation (NVAF) differ in presentation, treatment and outcomes compared to men. Despite AF being a common reason for ED visit, little is known regarding sex-specific differences in the ED and how it compares with admitted patients.

**Purpose:** We sought to determine whether sex-specific differences exist in rates of admission among NVAF patients presenting to the ED and if use of oral anticoagulation therapy and outcomes differ according to triage decision.

**Methods:** Patients>18 years old, presenting to the ED with incident NVAF (ICD-9-CM 427.3or ICD-10 code I48) in two Canadian provinces from 200x-20yy were included. ED records were linked to hospital records to identify patients admitted versus discharged from the ED. Outcomes included 30-day and 1-year stroke, heart failure and all-cause mortality. The pharmacy information network was queried for use of warfarin and direct oral anticoagulation within 90 days of NVAF diagnosis. Multivariable logistic regression assessed the association between sex, and outcomes.

**Results:** Of the XX ED NVAF patients, XX (XX%) were women and YY (YY%) were men (p<0.01). Compared to men, women were age (xx vs yy years, p<0.001), comorbidities, CHADS2 score. Overall, xx% women and yy% men were admitted to hospital (p<0.001). OAC therapy was initiated among XX% women discharged and XX% hospitalized and YY% men discharged and YY% hospitalized.

Women had higher/lower mortality rates (30-day admitted: xx% women and yy% men, p<0.001; discharged: xx% women and yy% men, p<0.001 and 1-year admitted: xx% women and yy% men, p<0.001; discharged: xx% women and yy% men, p<0.001); stroke and HF; whether differs by OAC therapy.

Would include outcomes data in a table.

**Conclusions:**

**BC Data Analysis**

**Methodology:**

**Cohort:**

**Timeframe:** April 2012-March 2015

1. Identify all ED visits with discharge diagnosis of AF (ICD10=I48) in any position
   1. Hospital Province = BC
   2. ED Visit indicator = 1 (True ED Visit)
2. Find first hospitalization admission within 24 hours after ED registration date/time
3. Identify comorbidities
   1. Pre-admit diagnosis in current hospitalization; or
   2. 3 year lookback of 1 DAD, 1 ED, or 2 Claims within a 2 year period
4. Define initial OAC prescription within 90 days of ED registration date
5. Define 30 Day and 1 Year Outcomes
   1. Death from BC vital statistics
   2. Stroke/HF from DAD (MRD Diagnosis)
6. Exclusions:
   1. Age < 18 at time of ED Visit
   2. Unknown Sex
   3. Non-Valvular AF, defined by: MV/AV Disease or Valve Repair/Replacement within 3 years prior.
   4. Prior AF defined as 1 DAD, 1 ED, or 1 Claim within 3 years prior.
   5. OAC Initiation: Exclude patients who died prior to 90 days

**Analyses**

1. Summarize baseline characteristics by sex, compare with t-test, Wilcoxon rank-sum, or chi-square test where appropriate.
2. Summarize rates of admission by sex, chi-square test.
3. Summarize rates of 90 day OAC initiation and 30 day/1 year outcomes (Mortality/Stroke/HF) by sex and admission status, chi-square
4. Model 1 year mortality using logistic regression among those surviving to 90 days