**Cohort Definition:**

**Three Sources:**

DAD – ICD10 = I48 in any diagnosis position, not considering diagnosis type for the time being.  
NACRS – ICD10 = I48 in any diagnosis position  
MSP – ICD9 = 4273 (AFIB/Flutter), Some other studies use a more general code of 427

Also looked into the following:

* AF Specific Drugs
* Cardioversions and Ablations

**Possible Cohort Definitions**

DAD, NACRS or 1 MSP

* Pros: Simple to derive, no loss in follow-up.
* Cons: May include some transient or temporary AF cases,

DAD, NACRS or 2 MSP > 30 days apart, < 1 year apart

* Pros: Less likely to include transient cases
* Cons: Lose 1 year of data at the end to define cohort. Short time to death following MSP diagnosis will cause cases not to be classified as AF. **Interesting cases arise.**
* Accurately determining Incident case time is important! We are interesting in OAC uptake in incident cases. Particularly which drug you are initiated on. This will be in a relatively short window

**Exclusions:**

* Age Range
* Reversible causes for AF (Cardiac Surgery, Pneumonia, Hyperthyroidism, Pregnancy)
* Other indications for OAC (Mechanical Heart Valve, Valvular Heart Surgery, Systemic Embolization)
* For OAC Uptake: CHADSVASC <=1

**Explorations:**

* 4273 + 427x > 30 days apart, < 1 year: 40% of those with only 1 4273 have an additional 427
* Lookback windows: 1,2,3,4,5 Year lookbacks considered. **Q:** If my incident case cohort starts in 2012, can I consider all data from 2005 on or do I need to have a consistent lookback window, i.e. ignore data prior to 2007 for a 5 year lookback or 2010 for a 2 year lookback.
* Subsequent hospitalizations in single claim patients:
  + AB vs BC
* Time between diagnosis (MSP), 90% within 1 year.

**Notes:**

* Diagnosis time must be during a period when you are registered as a BC resident
* NACRS Limited Coverage (2012/13-forward), Limited number of hospitals (starting at 20, up to 29 in 2013/2014)
* Eliminated duplicates (Same Day, Same Source with AF Diagnosis)

**Alberta.**

H/ED/2in1.

Total n=135,042. 2in1yr n=25488 (19%). H/ED n=109554 (81%).

Both have re H/ED approximately 50% (48.6% and 51.7%).

H/ED/1.

Total n=157,598. A) 2in1yr n=32425. B) Only 1=22556. C) H/ED n=102617.

Respectively re H/ED A) 59.6% B) 0% C) 51.4%.

**BC.**

H/ED/2in1.

Total n=158,464. 2in1 n=46,411 (29.3%). H/ED n=112,053 (70.7%).

H/ED 33.7% and 44.6%.

H/ED/1.

Total n=193,882. A) 2in1 n=48,148. B) Only 1=42,805. C) H/ED n=102,929.

Respectively re H/ED A) 47.4% % B) 18.2% C) 43.5%.

Comment from Alberta Statistician:

‘However, stepping back, the summary statement is this (and please correct me if I'm wrong): if you meet the case definition of 1 Claim / Hosp / ED because of the claim, most would be picked up soon thereafter in the 2in1 Claim / Hosp/ ED (50% in AB). Of the remaining fraction only 0-20% ever have a subsequent hospitalization / ED for AF.

To me, this says that by adding the 1 Claim, and expecting a 50% hospitalization rate, we get between 100% and 60% noise (AB and BC) in these additional cases.

Based on that, I'm still tempted to go with the 2in1 definition. Extra case capture that is mostly noise doesn't seem worth it to me (nor consistent with validated definitions).’