

Using telemetry to determine who (with PAF) should be anticoagulated

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Disclaimer

- By the time I speak in this program, everything I might say on this topic will have already been said.

“With PAF”

- Maybe “Permanent AF” has a clear meaning, but criteria for intermittent AF seems arbitrary.
 - What is the distribution of times between AF episodes? Is the distribution multimodal?
 - What is the distribution of times in AF during episodes? Is that distribution multimodal? How correlated are the times between and in AF episodes?
 - How does “past performance predict future returns”?
- Telemetry offers an opportunity to obtain better characterization of the disease and a more defensible parsing into syndromes.

Towards predicting risk

- Could use telemetry data to characterize stroke risk as a function of time between or in AF episodes.
- Is stroke risk mostly related to termination of AF?
- How long does my AF episode need to be before I form clot in my atrium?

Disease model for treatment

- With a proper disease model, one should be able to predict risks and benefits of treatment
 - Possibly adjusting intensity of anticoagulation based upon risk
- With the model and permanent telemetry in a patient
 - Possibly starting and stopping anticoagulation as indicated by the rhythm.
 - Reduce risks of ICH and other bleeding
- With widespread telemetry in the elderly
 - Probably eradicate cryptogenic embolic stroke

Modeling requires data

- Telemetry device manufacturers (plenty of incentive) should consider developing a registry for telemetry data
- Follow-up?
 - Piggyback onto future AF studies
 - Passive surveillance for events might suffice. Registry would need personal information to make this feasible.