Study cohort:
All PHHS adult patients with first encounter between January 1, 2009 and April 1, 2011

MODEL DERIVATION
- Run model
- Chart Selection
  - Stratified random sample of 500 charts
  - 50% with ‘diabetes’
  - 25% with ‘possible diabetes’
  - 25% with ‘no diabetes’
- Physician Review
  - 1. e-Model diagnosis
  - 2. e-Model identified date of diagnosis
- Model Adjustment
  - Address systematic inaccuracies
  - Point recalibration for individual e-model variables

Repeat x 2

After 3 cycles
Proceed to model validation

MODEL VALIDATION
- Run model
- Chart Selection
  - Stratified random sample of 343 charts
  - 50% with ‘diabetes’
  - 10% with ‘possible diabetes’
  - 40% with ‘no diabetes’
- Physician Review
  - 1. e-Model diagnosis
  - 2. e-Model identified date of diagnosis
- Model Evaluation
  - 1. Accuracy of e-model diagnosis
    - Kappa between e-model & physician reviewer
    - Sensitivity, specificity, PPV, NPV of e-model compared to physician gold standard
  - 2. Accuracy of e-model identified date of diagnosis
    - Exact match between e-model date and physician gold standard
    - Match within 3 months of e-model date and physician gold standard