

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