

FinalModeling
CHIS MLE_CURRENTASTHMA_FLAT
PROC SURVEYLOGISTIC - May 2, 2019

The LOGISTIC Procedure

| Model Information | | |
|---------------------------|---------------------------|---------------|
| Data Set | CHIS.CHIS_DATA_BINOMIAL_D | |
| Response Variable | nonasthmatic | Non-Asthmatic |
| Number of Response Levels | 2 | |
| Weight Variable | frwgt0 | |
| Model | generalized logit | |
| Optimization Technique | Newton-Raphson | |

| | |
|-----------------------------|----------|
| Number of Observations Read | 119710 |
| Number of Observations Used | 119710 |
| Sum of Weights Read | 26984609 |
| Sum of Weights Used | 26984609 |

| Response Profile | | | |
|------------------|---------------------|-----------------|--------------|
| Ordered Value | nonasthmatic | Total Frequency | Total Weight |
| 1 | 1 Non-Asthmatic | 106120 | 24218720 |
| 2 | 2 Current Asthmatic | 13590 | 2765889 |

Logits modeled use nonasthmatic='1 Non-Asthmatic' as the reference category.

| Model Convergence Status |
|-----------------------------------------------|
| Convergence criterion (GCONV=1E-8) satisfied. |

| Model Fit Statistics | | |
|----------------------|----------------|--------------------------|
| Criterion | Intercept Only | Intercept and Covariates |
| AIC | 17838929 | 17257360 |
| SC | 17838938 | 17257418 |
| -2 Log L | 17838927 | 17257348 |

| | | | |
|----------|--------|-----------------------|--------|
| R-Square | 0.9922 | Max-rescaled R-Square | 0.9922 |
|----------|--------|-----------------------|--------|

| Testing Global Null Hypothesis: BETA=0 | | | |
|----------------------------------------|------------|----|------------|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 581578.746 | 5 | <.0001 |
| Score | 524128.067 | 5 | <.0001 |
| Wald | 500195.238 | 5 | <.0001 |

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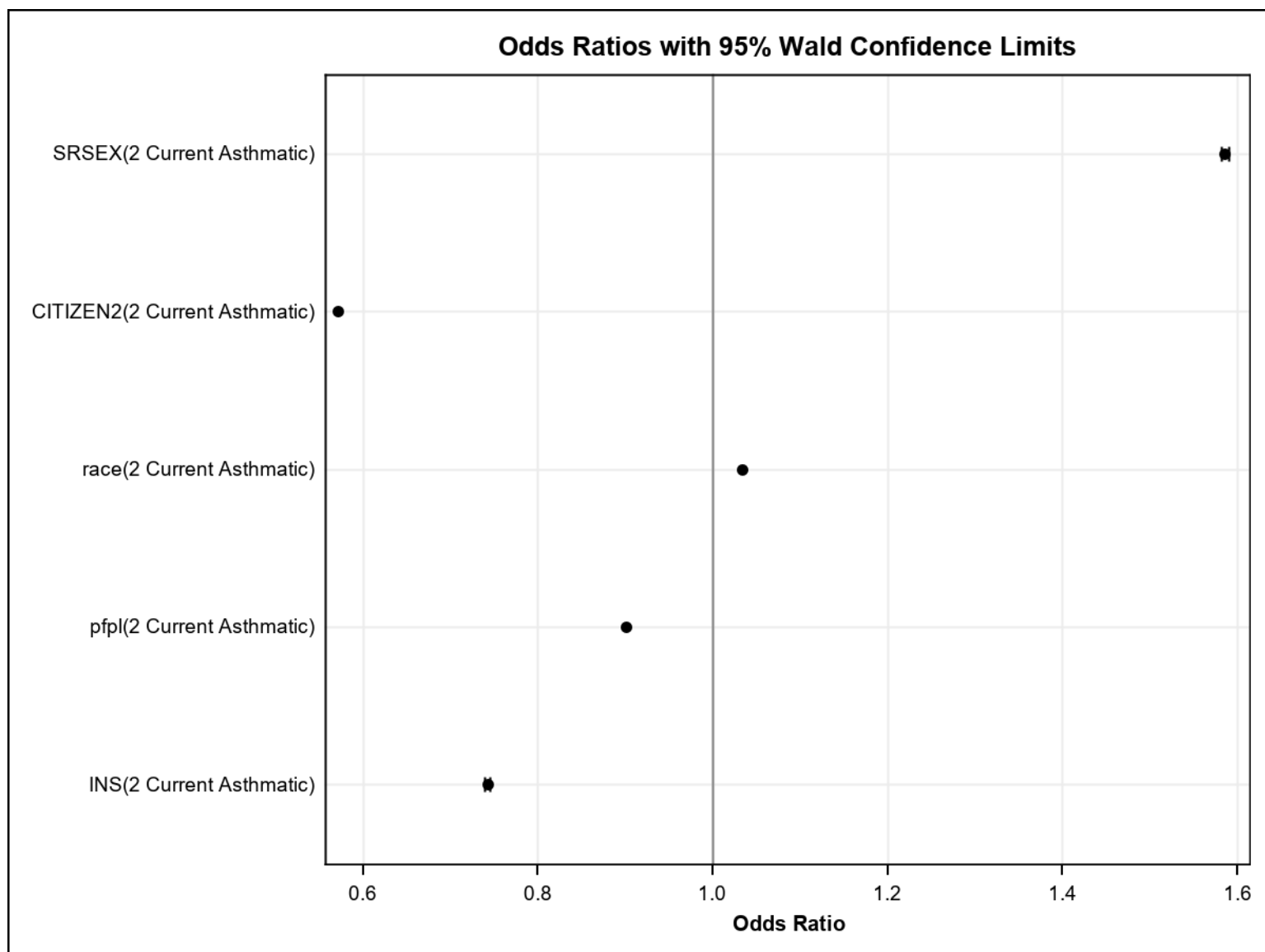
| Type 3 Analysis of Effects | | | |
|----------------------------|----|--------------------|------------|
| Effect | DF | Wald Chi-Square | Pr > ChiSq |
| SRSEX | 1 | 121950.126 | <.0001 |
| CITIZEN2 | 1 | 225428.066 | <.0001 |
| race | 1 | 11590.1940 | <.0001 |
| pfpl | 1 | 59500.3307 | <.0001 |
| INS | 1 | 18206.3130 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | | | |
|------------------------------------------|---------------------|----|----------|-------------------|--------------------|------------|--------------------------|
| Parameter | nonasthmatic | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq | Standardized Estimate |
| Intercept | 2 Current Asthmatic | 1 | -1.4716 | 0.00460 | 102321.617 | <.0001 | |
| SRSEX | 2 Current Asthmatic | 1 | 0.4610 | 0.00132 | 121950.126 | <.0001 | 1.9072 |
| CITIZEN2 | 2 Current Asthmatic | 1 | -0.5596 | 0.00118 | 225428.066 | <.0001 | -3.5370 |
| race | 2 Current Asthmatic | 1 | 0.0332 | 0.000308 | 11590.1940 | <.0001 | 0.6452 |
| pfpl | 2 Current Asthmatic | 1 | -0.1043 | 0.000427 | 59500.3307 | <.0001 | -1.2922 |
| INS | 2 Current Asthmatic | 1 | -0.2977 | 0.00221 | 18206.3130 | <.0001 | -0.8692 |

| Odds Ratio Estimates | | | | |
|----------------------|---------------------|-------------------|-------------------------------|-------|
| Effect | nonasthmatic | Point Estimate | 95% Wald Confidence Limits | |
| SRSEX | 2 Current Asthmatic | 1.586 | 1.582 | 1.590 |
| CITIZEN2 | 2 Current Asthmatic | 0.571 | 0.570 | 0.573 |
| race | 2 Current Asthmatic | 1.034 | 1.033 | 1.034 |
| pfpl | 2 Current Asthmatic | 0.901 | 0.900 | 0.902 |
| INS | 2 Current Asthmatic | 0.743 | 0.739 | 0.746 |

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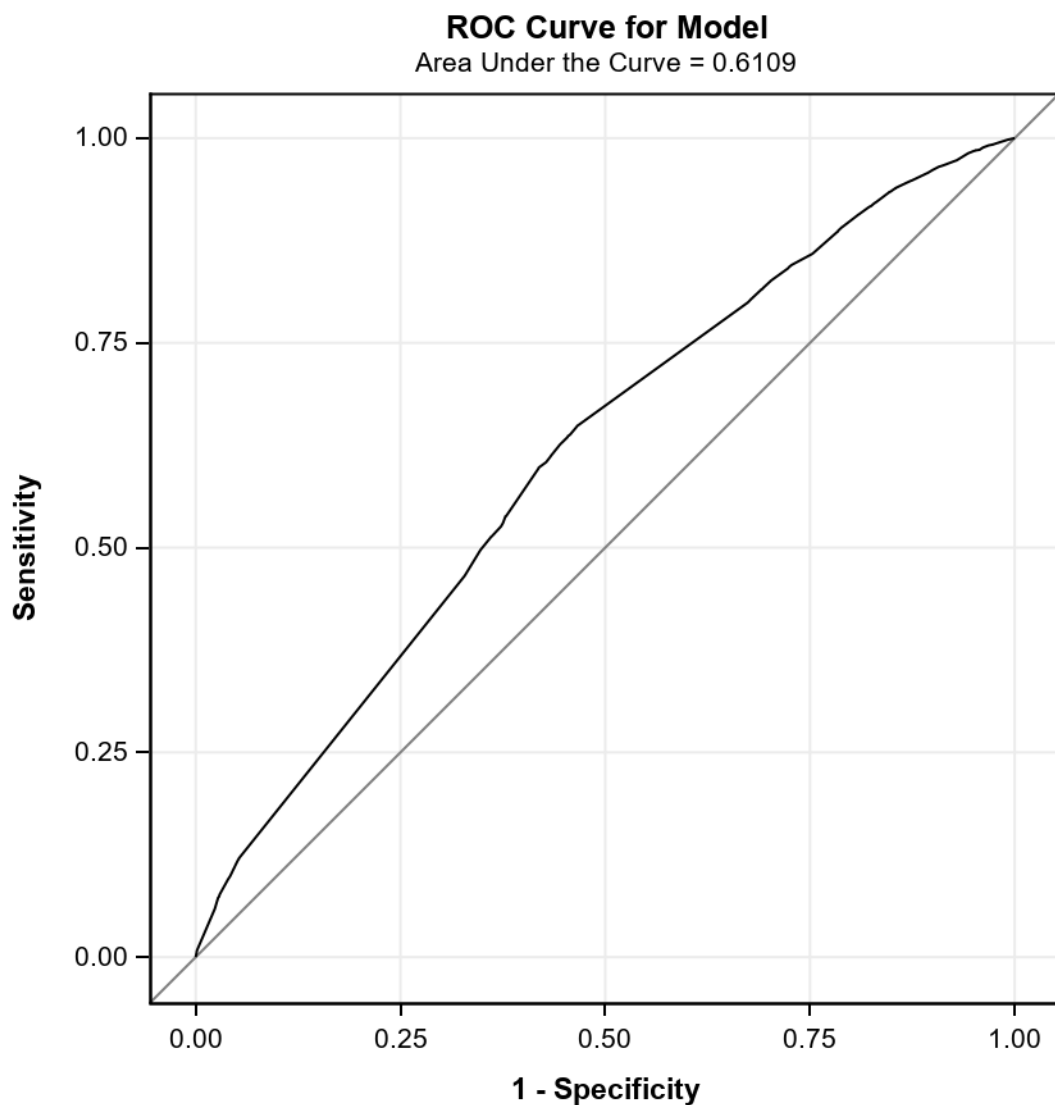
The LOGISTIC Procedure



| Association of Predicted Probabilities and Observed Responses | | | |
|---------------------------------------------------------------|------------|-----------|-------|
| Percent Concordant | 54.4 | Somers' D | 0.222 |
| Percent Discordant | 32.2 | Gamma | 0.256 |
| Percent Tied | 13.4 | Tau-a | 0.045 |
| Pairs | 1442170800 | c | 0.611 |

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The LOGISTIC Procedure



| Estimated Covariance Matrix | | | | | | |
|-------------------------------|-------------------------------------|---------------------------------|------------------------------------|--------------------------------|--------------------------------|-------------------------------|
| Parameter | Intercept_2 Current Asthmatic | SRSEX_2 Current Asthmatic | CITIZEN2_2 Current Asthmatic | race_2 Current Asthmatic | pfpl_2 Current Asthmatic | INS_2 Current Asthmatic |
| Intercept_2 Current Asthmatic | 0.000021 | -3.15E-6 | -2.28E-6 | -5.59E-7 | -8.99E-7 | -5.89E-6 |
| SRSEX_2 Current Asthmatic | -3.15E-6 | 1.743E-6 | -1.76E-8 | 1.585E-9 | 3.301E-8 | 1.976E-7 |
| CITIZEN2_2 Current Asthmatic | -2.28E-6 | -1.76E-8 | 1.389E-6 | 1.241E-7 | 5.806E-8 | -2.47E-7 |
| race_2 Current Asthmatic | -5.59E-7 | 1.585E-9 | 1.241E-7 | 9.494E-8 | -1.93E-8 | 5.652E-8 |
| pfpl_2 Current Asthmatic | -8.99E-7 | 3.301E-8 | 5.806E-8 | -1.93E-8 | 1.827E-7 | 7.099E-8 |
| INS_2 Current Asthmatic | -5.89E-6 | 1.976E-7 | -2.47E-7 | 5.652E-8 | 7.099E-8 | 4.867E-6 |

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| Estimated Correlation Matrix | | | | | | |
|-------------------------------|-------------------------------------|---------------------------------|------------------------------------|--------------------------------|--------------------------------|-------------------------------|
| Parameter | Intercept_2 Current Asthmatic | SRSEX_2 Current Asthmatic | CITIZEN2_2 Current Asthmatic | race_2 Current Asthmatic | pfpl_2 Current Asthmatic | INS_2 Current Asthmatic |
| Intercept_2 Current Asthmatic | 1.0000 | -0.5184 | -0.4203 | -0.3945 | -0.4571 | -0.5806 |
| SRSEX_2 Current Asthmatic | -0.5184 | 1.0000 | -0.0113 | 0.0039 | 0.0585 | 0.0678 |
| CITIZEN2_2 Current Asthmatic | -0.4203 | -0.0113 | 1.0000 | 0.3418 | 0.1153 | -0.0952 |
| race_2 Current Asthmatic | -0.3945 | 0.0039 | 0.3418 | 1.0000 | -0.1466 | 0.0832 |
| pfpl_2 Current Asthmatic | -0.4571 | 0.0585 | 0.1153 | -0.1466 | 1.0000 | 0.0753 |
| INS_2 Current Asthmatic | -0.5806 | 0.0678 | -0.0952 | 0.0832 | 0.0753 | 1.0000 |

| Classification Table | | | | | | | | | |
|----------------------|---------|---------------|-----------|---------------|-------------|------------------|------------------|-------------|-------------|
| | Correct | | Incorrect | | Percentages | | | | |
| Prob Level | Event | Non- Event | Event | Non- Event | Correct | Sensi- tivity | Speci- ficity | Pos Pred | Neg Pred |
| 0.852 | 0 | 106E3 | 0 | 13590 | 88.6 | 0.0 | 100.0 | . | 88.6 |

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Predicted Probabilities for nonasthmatic=2 Current Asthmatic with 95% Confidence Limits

At CITIZEN2=1.512 race=3.982 pfpl=4.326 INS=1.146

