FinalModeling
CHIS   MLE_ASTHMAESCALATION_FLAT
PROC SURVEYLOGISTIC - May 4, 2019

The LOGISTIC Procedure

Model Information		
Data Set	CHIS.CHIS_DATA_BINOMIAL_ED2	
Response Variable	asthmaesc	ED/UC Asthma Visit
Number of Response Levels	2	
Weight Variable	fnwgt0	
Model	generalized logit	
Optimization Technique	Newton-Raphson	

Number of Observations Read	13590
Number of Observations Used	13590
Sum of Weights Read	2765889
Sum of Weights Used	2765889

Response Profile			
Ordered Value	asthmaesc	Total Frequency	Total Weight
1	1 Asthmatic Escalation	1095	237258.9
2	2 No Asthma Escalation	12495	2528630.5

Logits modeled use asthmaesc='2 No Asthma Escalation' as the reference category.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	1618958.7	1572956.1
SC	1618966.2	1572986.2
-2 Log L	1618956.7	1572948.1

R-Square	0.9661	Max-rescaled R-Square	0.9661

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	46008.5604	3	<.0001
Score	48567.1313	3	<.0001
Wald	46488.6416	3	<.0001

FinalModeling
CHIS   MLE_ASTHMAESCALATION_FLAT
PROC SURVEYLOGISTIC - May 4, 2019

The LOGISTIC Procedure
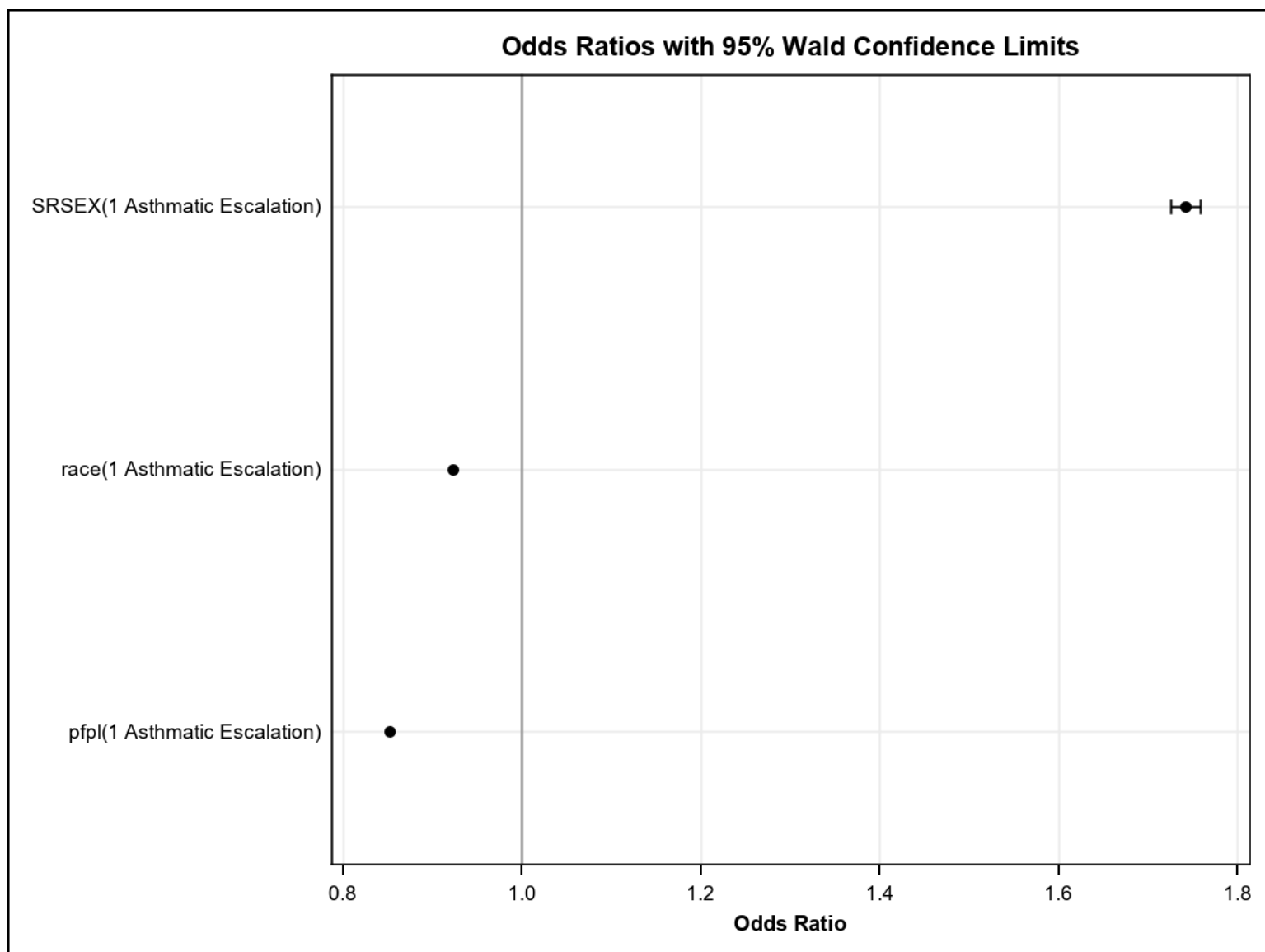
Type 3 Analysis of Effects

Effect	DF	Wald Chi-Square	Pr > ChiSq
SRSEX	1	12831.7701	<.0001
race	1	7638.2780	<.0001
pfpl	1	17582.2815	<.0001

Analysis of Maximum Likelihood Estimates

Parameter	asthmaesc	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate
Intercept	1 Asthmatic Escalation	1	-2.3141	0.0104	49264.9079	<.0001	
SRSEX	1 Asthmatic Escalation	1	0.5549	0.00490	12831.7701	<.0001	2.1149
race	1 Asthmatic Escalation	1	-0.0806	0.000923	7638.2780	<.0001	-1.4701
pfpl	1 Asthmatic Escalation	1	-0.1604	0.00121	17582.2815	<.0001	-1.9826

Odds Ratio Estimates

Effect	asthmaesc	Point Estimate	95% Wald Confidence Limits	
SRSEX	1 Asthmatic Escalation	1.742	1.725	1.759
race	1 Asthmatic Escalation	0.923	0.921	0.924
pfpl	1 Asthmatic Escalation	0.852	0.850	0.854

FinalModeling
CHIS   MLE_ASTHMAESCALATION_FLAT
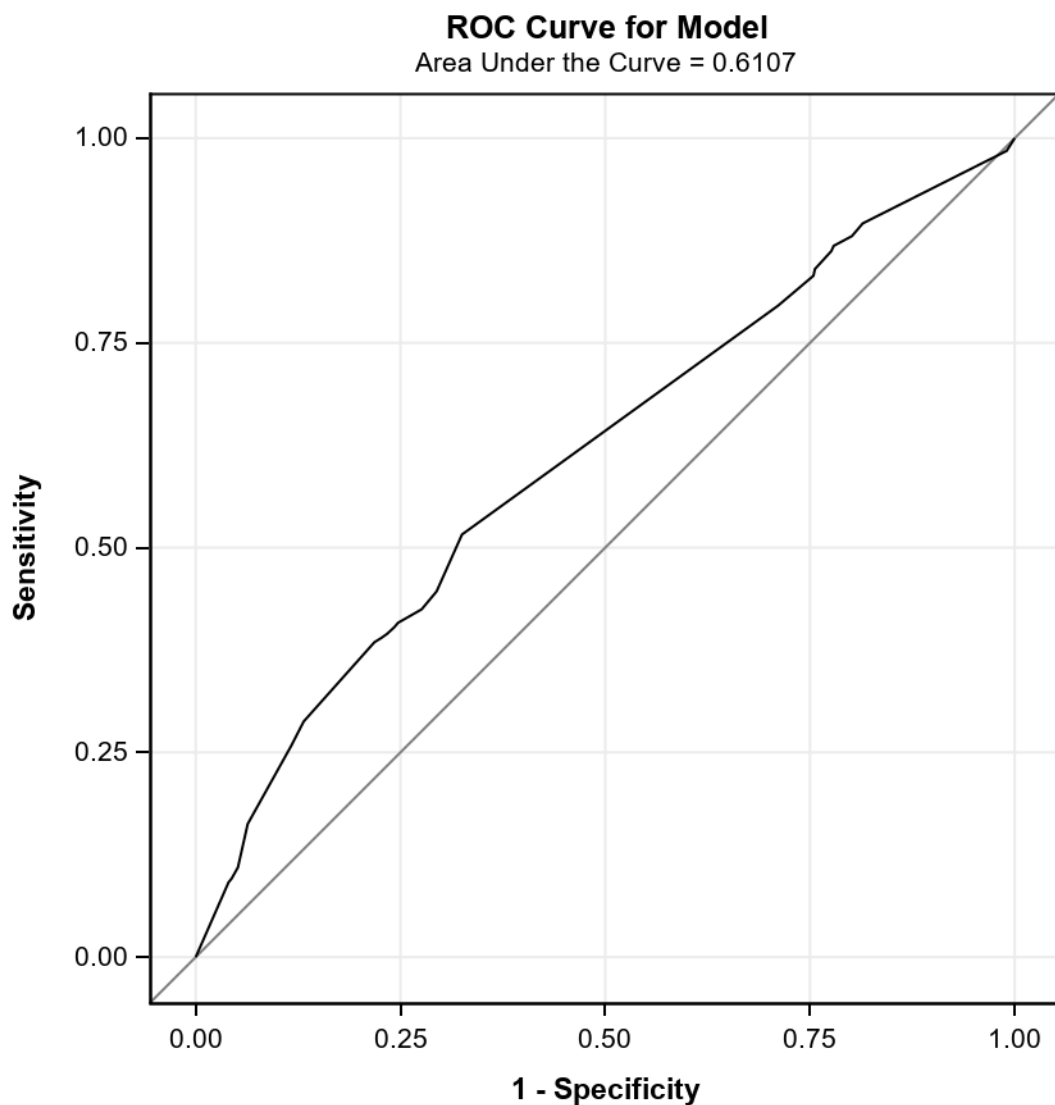*PROC SURVEYLOGISTIC - May 4, 2019*

The LOGISTIC Procedure

Odds Ratios with 95% Wald Confidence Limits

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	53.7	Somers' D	0.221
Percent Discordant	31.6	Gamma	0.260
Percent Tied	14.8	Tau-a	0.033
Pairs	13682025	c	0.611

FinalModeling
CHIS   MLE_ASTHMAESCALATION_FLAT
PROC SURVEYLOGISTIC - May 4, 2019

The LOGISTIC Procedure

ROC Curve for Model
Area Under the Curve = 0.6107

Estimated Covariance Matrix				
Parameter	**Intercept_1 Asthmatic Escalation**	**SRSEX_1 Asthmatic Escalation**	**race_1 Asthmatic Escalation**	**pfpl_1 Asthmatic Escalation**
Intercept_1 Asthmatic Escalation	0.000109	-0.00004	-2.46E-6	-5.28E-6
SRSEX_1 Asthmatic Escalation	-0.00004	0.000024	-2.25E-8	3.733E-7
race_1 Asthmatic Escalation	-2.46E-6	-2.25E-8	8.512E-7	-2.32E-7
pfpl_1 Asthmatic Escalation	-5.28E-6	3.733E-7	-2.32E-7	1.463E-6

FinalModeling
CHIS   MLE_ASTHMAESCALATION_FLAT
PROC SURVEYLOGISTIC - May 4, 2019

The LOGISTIC Procedure

Estimated Correlation Matrix				
Parameter	Intercept_1 Asthmatic Escalation	SRSEX_1 Asthmatic Escalation	race_1 Asthmatic Escalation	pfpl_1 Asthmatic Escalation
Intercept_1 Asthmatic Escalation	1.0000	-0.8395	-0.2554	-0.4186
SRSEX_1 Asthmatic Escalation	-0.8395	1.0000	-0.0050	0.0630
race_1 Asthmatic Escalation	-0.2554	-0.0050	1.0000	-0.2079
pfpl_1 Asthmatic Escalation	-0.4186	0.0630	-0.2079	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	12495	0	1095	91.9	0.0	100.0	.	91.9

Predicted Probabilities for asthmaesc=1 Asthmatic Escalation with 95% Confidence Limits
At race=4.434 pfpl=4.237