

## *The SAS System*

### *The SURVEYLOGISTIC Procedure*

Model Information	
Data Set	WORK.CHS_CLEAN
Response Variable	didntgetcare18
Number of Response Levels	2
Stratum Variable	strata
Number of Strata	68
Weight Variable	wt19_dual
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	10076
Number of Observations Used	9877
Sum of Weights Read	6670172
Sum of Weights Used	6543154

Response Profile			
Ordered Value	didntgetcare18	Total Frequency	Total Weight
1	1	1042	727008.2
2	2	8835	5816146.0

*Probability modeled is didntgetcare18='1'.*

**Note:** 199 observations were deleted due to missing values for the response or explanatory variables.

Class Level Information					
Class	Value	Design Variables			
newrace	1	0	0	0	0
	2	1	0	0	0

Class Level Information					
Class	Value	Design Variables			
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
imputed_povertygroup	1	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
birthsex	1	0			
	2	1			
agegroup	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
education	1	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	4564889.5	4490925.0
SC	4564903.2	4491144.1
-2 Log L	4564887.5	4490893.0

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	7.45	14.9994	147129	<.0001
Score	3.40	15	9795	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Wald	3.15	15	9795	<.0001
NOTE: Second-order Rao-Scott design correction 0.0000 applied to the Likelihood Ratio test.				

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
newrace	3.02	4	9806	0.0168
imputed_povertygroup	2.68	4	9806	0.0301
birthsex	0.04	1	9809	0.8405
agegroup	6.25	3	9807	0.0003
education	0.81	3	9807	0.4899

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr >  t
Intercept		-2.2169	0.2828	-7.84	<.0001
newrace	2	-0.3114	0.1494	-2.08	0.0371
newrace	3	0.0683	0.1420	0.48	0.6306
newrace	4	-0.2197	0.1840	-1.19	0.2325
newrace	5	0.4669	0.3087	1.51	0.1305
imputed_povertygroup	2	-0.1244	0.1417	-0.88	0.3799
imputed_povertygroup	3	-0.0808	0.1437	-0.56	0.5737
imputed_povertygroup	4	-0.2458	0.1689	-1.46	0.1457
imputed_povertygroup	5	-0.6075	0.1937	-3.14	0.0017
birthsex	2	-0.0206	0.1024	-0.20	0.8405
agegroup	2	0.6267	0.1991	3.15	0.0016
agegroup	3	0.4380	0.2044	2.14	0.0321
agegroup	4	0.1221	0.2255	0.54	0.5883
education	2	-0.1983	0.1597	-1.24	0.2143
education	3	-0.00676	0.1616	-0.04	0.9666
education	4	-0.00076	0.1591	-0.00	0.9962
NOTE: The degrees of freedom for the t tests is 9809.					

Odds Ratio Estimates
----------------------

Effect		Point Estimate	95% Confidence Limits	
newrace 1	2 vs	0.732	0.547	0.982
newrace 1	3 vs	1.071	0.811	1.414
newrace 1	4 vs	0.803	0.560	1.151
newrace 1	5 vs	1.595	0.871	2.921
imputed_povertygroup 2 vs 1		0.883	0.669	1.166
imputed_povertygroup 3 vs 1		0.922	0.696	1.222
imputed_povertygroup 4 vs 1		0.782	0.562	1.089
imputed_povertygroup 5 vs 1		0.545	0.373	0.796
birthsex	2 vs 1	0.980	0.801	1.197
agegroup 1	2 vs	1.871	1.267	2.765
agegroup 1	3 vs	1.550	1.038	2.313
agegroup 1	4 vs	1.130	0.726	1.758
education	2 vs 1	0.820	0.600	1.122
education	3 vs 1	0.993	0.724	1.363
education	4 vs 1	0.999	0.732	1.365
NOTE: The degrees of freedom in computing the confidence limits is 9809.				

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	57.8	Somers' D	0.177
Percent Discordant	40.1	Gamma	0.181
Percent Tied	2.1	Tau-a	0.033
Pairs	9206070	c	0.588

## *The SAS System*

### *The SURVEYLOGISTIC Procedure*

Model Information	
Data Set	WORK.CHS_CLEAN
Response Variable	pcp18
Number of Response Levels	2
Stratum Variable	strata
Number of Strata	68
Weight Variable	wt19_dual
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	10076
Number of Observations Used	9878
Sum of Weights Read	6670172
Sum of Weights Used	6541757

Response Profile			
Ordered Value	pcp18	Total Frequency	Total Weight
1	1	8645	5511147.7
2	2	1233	1030609.2

*Probability modeled is pcp18='1'.*

**Note:** 198 observations were deleted due to missing values for the response or explanatory variables.

Class Level Information					
Class	Value	Design Variables			
newrace	1	0	0	0	0

Class Level Information					
Class	Value	Design Variables			
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
<b>imputed_povertygroup</b>	<b>1</b>	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
<b>birthsex</b>	<b>1</b>	0			
	2	1			
<b>agegroup</b>	<b>1</b>	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
<b>education</b>	<b>1</b>	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	5698832.2	5183004.0
SC	5698845.9	5183223.1
-2 Log L	5698830.2	5182972.0

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	51.94	14.9996	147146	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Score	27.65	15	9796	<.0001
Wald	19.11	15	9796	<.0001
NOTE: Second-order Rao-Scott design correction 0.0000 applied to the Likelihood Ratio test.				

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
newrace	16.05	4	9807	<.0001
imputed_povertygroup	2.28	4	9807	0.0581
birthsex	48.55	1	9810	<.0001
agegroup	50.56	3	9808	<.0001
education	3.81	3	9808	0.0096

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr >  t
Intercept		0.5982	0.2034	2.94	0.0033
newrace	2	0.1962	0.1455	1.35	0.1777
newrace	3	-0.5924	0.1192	-4.97	<.0001
newrace	4	0.2768	0.1703	1.63	0.1041
newrace	5	-0.5932	0.2747	-2.16	0.0309
imputed_povertygroup	2	0.1121	0.1305	0.86	0.3902
imputed_povertygroup	3	0.1025	0.1357	0.76	0.4498
imputed_povertygroup	4	0.0255	0.1535	0.17	0.8683
imputed_povertygroup	5	0.4865	0.1741	2.79	0.0052
birthsex	2	0.6387	0.0917	6.97	<.0001
agegroup	2	0.1294	0.1409	0.92	0.3585
agegroup	3	1.0565	0.1558	6.78	<.0001
agegroup	4	1.7670	0.2031	8.70	<.0001
education	2	0.3367	0.1385	2.43	0.0151
education	3	0.4681	0.1464	3.20	0.0014
education	4	0.2246	0.1434	1.57	0.1174
NOTE: The degrees of freedom for the t tests is 9810.					

### Odds Ratio Estimates

Effect		Point Estimate	95% Confidence Limits	
newrace 1	2 vs	1.217	0.915	1.618
newrace 1	3 vs	0.553	0.438	0.699
newrace 1	4 vs	1.319	0.945	1.842
newrace 1	5 vs	0.553	0.323	0.947
imputed_povertygroup 2 vs 1		1.119	0.866	1.445
imputed_povertygroup 3 vs 1		1.108	0.849	1.445
imputed_povertygroup 4 vs 1		1.026	0.759	1.386
imputed_povertygroup 5 vs 1		1.627	1.156	2.288
birthsex	2 vs 1	1.894	1.583	2.267
agegroup 1	2 vs	1.138	0.863	1.500
agegroup 1	3 vs	2.876	2.119	3.904
agegroup 1	4 vs	5.854	3.931	8.716
education	2 vs 1	1.400	1.067	1.837
education	3 vs 1	1.597	1.199	2.128
education	4 vs 1	1.252	0.945	1.658
NOTE: The degrees of freedom in computing the confidence limits is 9810.				

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.7	Somers' D	0.423
Percent Discordant	28.4	Gamma	0.426
Percent Tied	0.9	Tau-a	0.092
Pairs	10659285	c	0.711



## *The SAS System*

### *The SURVEYLOGISTIC Procedure*

Model Information	
Data Set	WORK.CHS_CLEAN
Response Variable	medcost18
Number of Response Levels	2
Stratum Variable	strata
Number of Strata	68
Weight Variable	wt19_dual
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Variance Estimation	
Method	Taylor Series
Variance Adjustment	Degrees of Freedom (DF)

Number of Observations Read	10076
Number of Observations Used	8982
Sum of Weights Read	6670172
Sum of Weights Used	5773829

Response Profile			
Ordered Value	medcost18	Total Frequency	Total Weight
1	1	831	567883.9
2	2	8151	5205945.1

*Probability modeled is medcost18='1'.*

**Note:** 1094 observations were deleted due to missing values for the response or explanatory variables.

Class Level Information					
Class	Value	Design Variables			
newrace	1	0	0	0	0

Class Level Information					
Class	Value	Design Variables			
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
<b>imputed_povertygroup</b>	<b>1</b>	0	0	0	0
	2	1	0	0	0
	3	0	1	0	0
	4	0	0	1	0
	5	0	0	0	1
<b>birthsex</b>	<b>1</b>	0			
	2	1			
<b>agegroup</b>	<b>1</b>	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	
<b>education</b>	<b>1</b>	0	0	0	
	2	1	0	0	
	3	0	1	0	
	4	0	0	1	

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	3712031.7	3592318.7
SC	3712045.3	3592535.8
-2 Log L	3712029.7	3592286.7

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Likelihood Ratio	12.42	14.9993	133704	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	F Value	Num DF	Den DF	Pr > F
Score	5.56	15	8900	<.0001
Wald	5.26	15	8900	<.0001
NOTE: Second-order Rao-Scott design correction 0.0000 applied to the Likelihood Ratio test.				

Type 3 Analysis of Effects				
Effect	F Value	Num DF	Den DF	Pr > F
newrace	3.05	4	8911	0.0160
imputed_povertygroup	7.42	4	8911	<.0001
birthsex	0.82	1	8914	0.3664
agegroup	10.04	3	8912	<.0001
education	4.82	3	8912	0.0023

Analysis of Maximum Likelihood Estimates					
Parameter		Estimate	Standard Error	t Value	Pr >  t
Intercept		-2.0766	0.3236	-6.42	<.0001
newrace	2	-0.3896	0.1609	-2.42	0.0155
newrace	3	-0.2716	0.1581	-1.72	0.0859
newrace	4	-0.6072	0.2051	-2.96	0.0031
newrace	5	0.2356	0.3980	0.59	0.5540
imputed_povertygroup	2	0.2910	0.1634	1.78	0.0749
imputed_povertygroup	3	-0.0713	0.1727	-0.41	0.6799
imputed_povertygroup	4	-0.0435	0.1875	-0.23	0.8167
imputed_povertygroup	5	-0.8793	0.2231	-3.94	<.0001
birthsex	2	-0.1021	0.1131	-0.90	0.3664
agegroup	2	0.4946	0.2238	2.21	0.0272
agegroup	3	0.0273	0.2310	0.12	0.9060
agegroup	4	-0.2978	0.2451	-1.21	0.2244
education	2	-0.1264	0.2014	-0.63	0.5301
education	3	-0.2287	0.2098	-1.09	0.2757
education	4	0.3175	0.1985	1.60	0.1097
NOTE: The degrees of freedom for the t tests is 8914.					

Odds Ratio Estimates
----------------------

Effect		Point Estimate	95% Confidence Limits	
newrace 1	2 vs	0.677	0.494	0.928
newrace 1	3 vs	0.762	0.559	1.039
newrace 1	4 vs	0.545	0.365	0.815
newrace 1	5 vs	1.266	0.580	2.762
imputed_povertygroup 2 vs 1		1.338	0.971	1.843
imputed_povertygroup 3 vs 1		0.931	0.664	1.306
imputed_povertygroup 4 vs 1		0.957	0.663	1.383
imputed_povertygroup 5 vs 1		0.415	0.268	0.643
birthsex	2 vs 1	0.903	0.723	1.127
agegroup 1	2 vs	1.640	1.057	2.543
agegroup 1	3 vs	1.028	0.653	1.616
agegroup 1	4 vs	0.742	0.459	1.200
education	2 vs 1	0.881	0.594	1.308
education	3 vs 1	0.796	0.527	1.200
education	4 vs 1	1.374	0.931	2.027
NOTE: The degrees of freedom in computing the confidence limits is 8914.				

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	58.9	Somers' D	0.195
Percent Discordant	39.5	Gamma	0.198
Percent Tied	1.6	Tau-a	0.033
Pairs	6773481	c	0.597