# The LOGISTIC Procedure

| Model Information | | |
|---|---|---|
| **Data Set** | WORK.VA3 | |
| **Response Variable** | death30 | death30 |
| **Number of Response Levels** | 2 | |
| **Model** | binary logit | |
| **Optimization Technique** | Fisher's scoring | |

| | |
|---|---|
| **Number of Observations Read** | 26518 |
| **Number of Observations Used** | 24618 |

| Response Profile | | |
|---|---|---|
| **Ordered Value** | **death30** | **Total Frequency** |
| **1** | 0 | 23872 |
| **2** | 1 | 746 |

**Probability modeled is death30='1'.**

**Note:** 1900 observations were deleted due to missing values for the response or explanatory variables.

| Class Level Information | | |
|---|---|---|
| **Class** | **Value** | **Design Variables** |
| **proced** | **0** | 0 |
| | **1** | 1 |
| **bhealth** | **0** | 0 |
| | **1** | 1 |

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

| Model Fit Statistics | | |
|---|---|---|
| **Criterion** | **Intercept Only** | **Intercept and Covariates** |
| **AIC** | 6687.951 | 6589.202 |
| **SC** | 6696.063 | 6621.647 |
| **-2 Log L** | 6685.951 | 6581.202 |

# The LOGISTIC Procedure

| Testing Global Null Hypothesis: BETA=0 | | | |
|---|---|---|---|
| **Test** | **Chi-Square** | **DF** | **Pr > ChiSq** |
| **Likelihood Ratio** | 104.7491 | 3 | <.0001 |
| **Score** | 89.3614 | 3 | <.0001 |
| **Wald** | 82.9336 | 3 | <.0001 |

| Type 3 Analysis of Effects | | | |
|---|---|---|---|
| **Effect** | **DF** | **Wald Chi-Square** | **Pr > ChiSq** |
| **bmi2** | 1 | 0.7514 | 0.3860 |
| **proced** | 1 | 9.7144 | 0.0018 |
| **bhealth** | 1 | 65.2407 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | | |
|---|---|---|---|---|---|---|
| **Parameter** | | **DF** | **Estimate** | **Standard Error** | **Wald Chi-Square** | **Pr > ChiSq** |
| **Intercept** | | 1 | -4.8219 | 0.3131 | 237.2288 | <.0001 |
| **bmi2** | | 1 | 0.00902 | 0.0104 | 0.7514 | 0.3860 |
| **proced** | **1** | 1 | 0.3251 | 0.1043 | 9.7144 | 0.0018 |
| **bhealth** | **1** | 1 | 0.9944 | 0.1231 | 65.2407 | <.0001 |

| Odds Ratio Estimates | | | |
|---|---|---|---|
| **Effect** | **Point Estimate** | **95% Wald Confidence Limits** | |
| **bmi2** | 1.009 | 0.989 | 1.030 |
| **proced 1 vs 0** | 1.384 | 1.128 | 1.698 |
| **bhealth 1 vs 0** | 2.703 | 2.124 | 3.441 |

| Association of Predicted Probabilities and Observed Responses | | | |
|---|---|---|---|
| **Percent Concordant** | 59.2 | **Somers' D** | 0.184 |
| **Percent Discordant** | 40.8 | **Gamma** | 0.184 |
| **Percent Tied** | 0.0 | **Tau-a** | 0.011 |
| **Pairs** | 17808512 | **c** | 0.592 |

## The LOGISTIC Procedure

| Estimated Covariance Matrix | | | | |
|---|---|---|---|---|
| **Parameter** | **Intercept** | **bmi2** | **proced1** | **bhealth1** |
| **Intercept** | 0.09801 | -0.0029 | -0.00933 | -0.00499 |
| **bmi2** | -0.0029 | 0.000108 | 5.838E-6 | -0.00029 |
| **proced1** | -0.00933 | 5.838E-6 | 0.010879 | -0.00009 |
| **bhealth1** | -0.00499 | -0.00029 | -0.00009 | 0.015158 |