**The REG Procedure**

**Model: MODEL1**

**Dependent Variable: new\_case\_rate\_percent New Case Rate (%)**

|  |  |
| --- | --- |
| **Number of Observations Read** | 441 |
| **Number of Observations Used** | 441 |

| **Analysis of Variance** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| **Model** | 1 | 1.96008 | 1.96008 | 5.97 | 0.0150 |
| **Error** | 439 | 144.20192 | 0.32848 |  |  |
| **Corrected Total** | 440 | 146.16201 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Root MSE** | 0.57313 | **R-Square** | 0.0134 |
| **Dependent Mean** | 0.66488 | **Adj R-Sq** | 0.0112 |
| **Coeff Var** | 86.20010 |  |  |

| **Parameter Estimates** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > |t|** |
| **Intercept** | Intercept | 1 | 0.52591 | 0.06310 | 8.33 | <.0001 |
| **fully\_vaccinated\_rate\_percent** | Fully Vaccinated Rate (%) | 1 | 0.00370 | 0.00151 | 2.44 | 0.0150 |

**The REG Procedure**

**Model: MODEL1**

**Dependent Variable: new\_death\_rate\_percent New Death Rate (%)**

|  |  |
| --- | --- |
| **Number of Observations Read** | 441 |
| **Number of Observations Used** | 441 |

| **Analysis of Variance** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| **Model** | 1 | 0.00061401 | 0.00061401 | 10.47 | 0.0013 |
| **Error** | 439 | 0.02575 | 0.00005865 |  |  |
| **Corrected Total** | 440 | 0.02636 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Root MSE** | 0.00766 | **R-Square** | 0.0233 |
| **Dependent Mean** | 0.00816 | **Adj R-Sq** | 0.0211 |
| **Coeff Var** | 93.83492 |  |  |

| **Parameter Estimates** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Label** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > |t|** |
| **Intercept** | Intercept | 1 | 0.01062 | 0.00084313 | 12.60 | <.0001 |
| **fully\_vaccinated\_rate\_percent** | Fully Vaccinated Rate (%) | 1 | -0.00006542 | 0.00002022 | -3.24 | 0.0013 |

**The REG Procedure**

**Model: MODEL1**

**Dependent Variable: new\_case\_rate\_percent New Case Rate (%)**

**Chart, scatter chart

Description automatically generated**

**The REG Procedure**

**Model: MODEL1**

**Dependent Variable: new\_death\_rate\_percent New Death Rate (%)**

**Chart, scatter chart

Description automatically generated**

**The MEANS Procedure**

| **month** | **N Obs** | **Variable** | **Label** | **N** | **Mean** | **Std Dev** |
| --- | --- | --- | --- | --- | --- | --- |
| 20-01 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 4.6796232E-6  0 | 0.000025691  0 |
| 20-02 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.000051203  7.7428289E-7 | 0.000200143  3.4180466E-6 |
| 20-03 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.0430506  0.0010174 | 0.0436509  0.0012885 |
| 20-04 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.2192816  0.0120132 | 0.2206704  0.0161207 |
| 20-05 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.2188304  0.0112353 | 0.1513629  0.0122495 |
| 20-06 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.2348704  0.0056339 | 0.1583585  0.0041954 |
| 20-07 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.4883821  0.0070958 | 0.3659906  0.0070773 |
| 20-08 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.3980471  0.0074000 | 0.2182805  0.0065045 |
| 20-09 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.4147673  0.0061750 | 0.2556934  0.0042299 |
| 20-10 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.7860898  0.0086989 | 0.5806056  0.0062581 |
| 20-11 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 1.7132582  0.0165960 | 0.9525782  0.0116928 |
| 20-12 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 1.9157149  0.0288628 | 0.5528120  0.0124951 |
| 21-01 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 1.6115385  0.0270337 | 0.5906240  0.0119467 |
| 21-02 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.6222629  0.0145738 | 0.2066676  0.0080082 |
| 21-03 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.5033505  0.0073915 | 0.2228607  0.0037639 |
| 21-04 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.5379624  0.0048631 | 0.2791528  0.0030524 |
| 21-05 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.2753937  0.0040812 | 0.0999289  0.0021633 |
| 21-06 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.1251203  0.0026749 | 0.0797702  0.0012026 |
| 21-07 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.3882812  0.0027549 | 0.3273475  0.0021941 |
| 21-08 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 1.2433628  0.0091745 | 0.7556476  0.0090247 |
| 21-09 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 1.3785252  0.0153337 | 0.6293651  0.0098716 |
| 21-10 | 49 | new\_case\_rate\_percent  new\_death\_rate\_percent | New Case Rate (%)  New Death Rate (%) | 49  49 | 0.9096919  0.0126066 | 0.5349099  0.0081717 |

Chart, histogram

Description automatically generated

Chart, histogram

Description automatically generated

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**The MEANS Procedure**

| **indicator** | **N Obs** | **Variable** | **N** | **Mean** | **Median** | **Std Dev** | **Minimum** | **Maximum** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ≥ 50% vaccination rate | 14 | new\_case\_rate\_percent  new\_death\_rate\_percent | 14  14 | 1.0515463  0.0193878 | 0.6900666  0.0156363 | 0.6867853  0.0108914 | 0.3799468  0.0062135 | 2.2169753  0.0411994 |
| < 50% vaccination rate | 35 | new\_case\_rate\_percent  new\_death\_rate\_percent | 35  35 | 0.8529502  0.0098941 | 0.8400238  0.0093434 | 0.4604348  0.0047337 | 0.3276257  0.0028808 | 3.0001732  0.0195296 |

**The UNIVARIATE Procedure**

**Variable: new\_case\_rate\_percent**

**indicator=≥ 50% vaccination rate**

| **Moments** | | | |
| --- | --- | --- | --- |
| **N** | 14 | **Sum Weights** | 14 |
| **Mean** | 1.05154626 | **Sum Observations** | 14.7216476 |
| **Std Deviation** | 0.68678533 | **Variance** | 0.4716741 |
| **Skewness** | 0.71149645 | **Kurtosis** | -1.4381054 |
| **Uncorrected SS** | 21.6122567 | **Corrected SS** | 6.13176325 |
| **Coeff Variation** | 65.3119471 | **Std Error Mean** | 0.1835511 |

| **Basic Statistical Measures** | | | |
| --- | --- | --- | --- |
| **Location** | | **Variability** | |
| **Mean** | 1.051546 | **Std Deviation** | 0.68679 |
| **Median** | 0.690067 | **Variance** | 0.47167 |

| **Tests for Normality** | | | | |
| --- | --- | --- | --- | --- |
| **Test** | **Statistic** | | **p Value** | |
| **Shapiro-Wilk** | **W** | 0.792704 | **Pr < W** | 0.0041 |
| **Kolmogorov-Smirnov** | **D** | 0.288733 | **Pr > D** | <0.0100 |
| **Cramer-von Mises** | **W-Sq** | 0.249011 | **Pr > W-Sq** | <0.0050 |
| **Anderson-Darling** | **A-Sq** | 1.333107 | **Pr > A-Sq** | <0.0050 |

**The UNIVARIATE Procedure**

**indicator=≥ 50% vaccination rate**

Chart, scatter chart

Description automatically generated

**The UNIVARIATE Procedure**

**Variable: new\_case\_rate\_percent**

**indicator=< 50% vaccination rate**

| **Moments** | | | |
| --- | --- | --- | --- |
| **N** | 35 | **Sum Weights** | 35 |
| **Mean** | 0.85295015 | **Sum Observations** | 29.8532553 |
| **Std Deviation** | 0.4604348 | **Variance** | 0.2120002 |
| **Skewness** | 2.99151696 | **Kurtosis** | 13.6499645 |
| **Uncorrected SS** | 32.6713456 | **Corrected SS** | 7.20800694 |
| **Coeff Variation** | 53.9814429 | **Std Error Mean** | 0.07782769 |

| **Tests for Normality** | | | | |
| --- | --- | --- | --- | --- |
| **Test** | **Statistic** | | **p Value** | |
| **Shapiro-Wilk** | **W** | 0.728165 | **Pr < W** | <0.0001 |
| **Kolmogorov-Smirnov** | **D** | 0.169038 | **Pr > D** | 0.0123 |
| **Cramer-von Mises** | **W-Sq** | 0.231043 | **Pr > W-Sq** | <0.0050 |
| **Anderson-Darling** | **A-Sq** | 1.749596 | **Pr > A-Sq** | <0.0050 |

**The UNIVARIATE Procedure**

**indicator=< 50% vaccination rate**

Chart, line chart, scatter chart

Description automatically generated

**The NPAR1WAY Procedure**

| **Wilcoxon Scores (Rank Sums) for Variable new\_case\_rate\_percent Classified by Variable indicator** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **indicator** | **N** | **Sum of Scores** | **Expected Under H0** | **Std Dev Under H0** | **Mean Score** |
| **≥ 50% vaccination rate** | 14 | 354.0 | 350.0 | 45.184806 | 25.285714 |
| **< 50% vaccination rate** | 35 | 871.0 | 875.0 | 45.184806 | 24.885714 |

| **Wilcoxon Two-Sample Test** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Statistic (S)** | **Z** | **Pr > Z** | **Pr > |Z|** | **t Approximation** | | **Exact** | |
| **Pr > Z** | **Pr > |Z|** | **Pr >= S** | **Pr >= |S-Mean|** |
| **Z includes a continuity correction of 0.5.** | | | | | | | |
| 354.0000 | 0.0775 | 0.4691 | 0.9383 | 0.4693 | 0.9386 | 0.4695 | 0.9390 |