

| 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  |

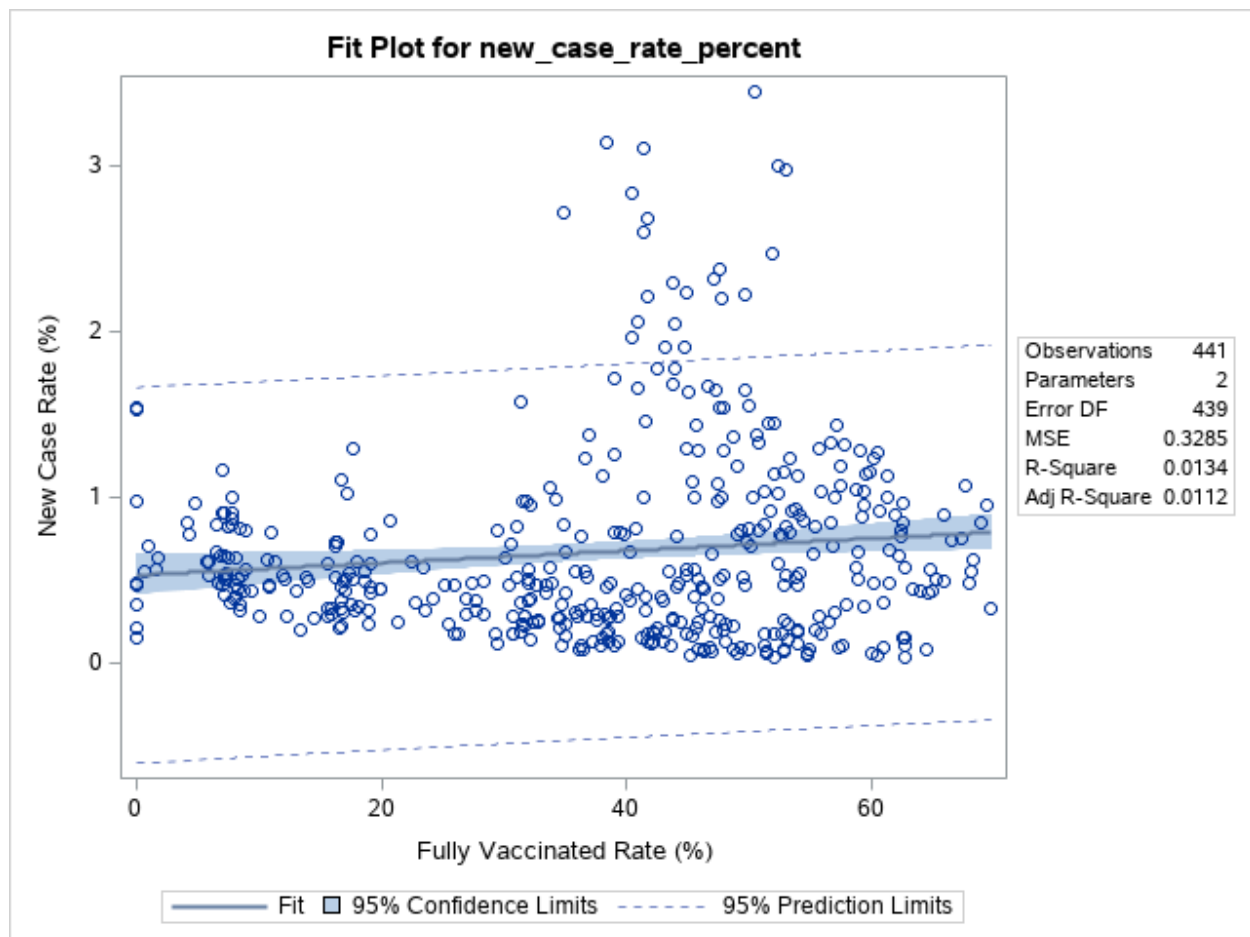
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| The REG Procedure   |     |
|---|-----|
| Model: MODEL1   |     |
| Dependent Variable: new_death_rate_percent New Death Rate (%) |     |
| Number of Observations Read                                   | 441 |
| Number of Observations Used                                   | 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  |

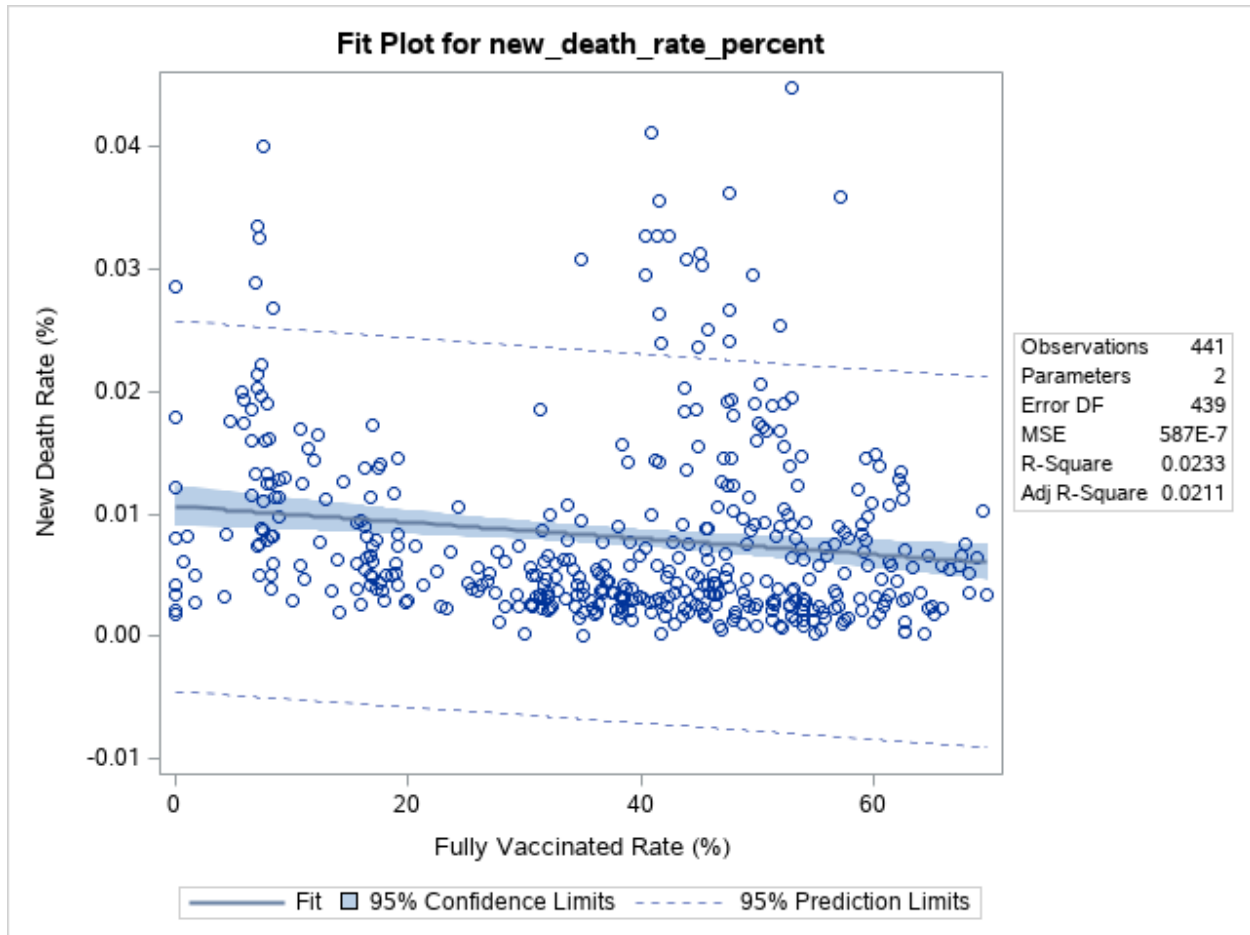
**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: new\_case\_rate\_percent New Case Rate (%)**



### The REG Procedure

Model: MODEL1

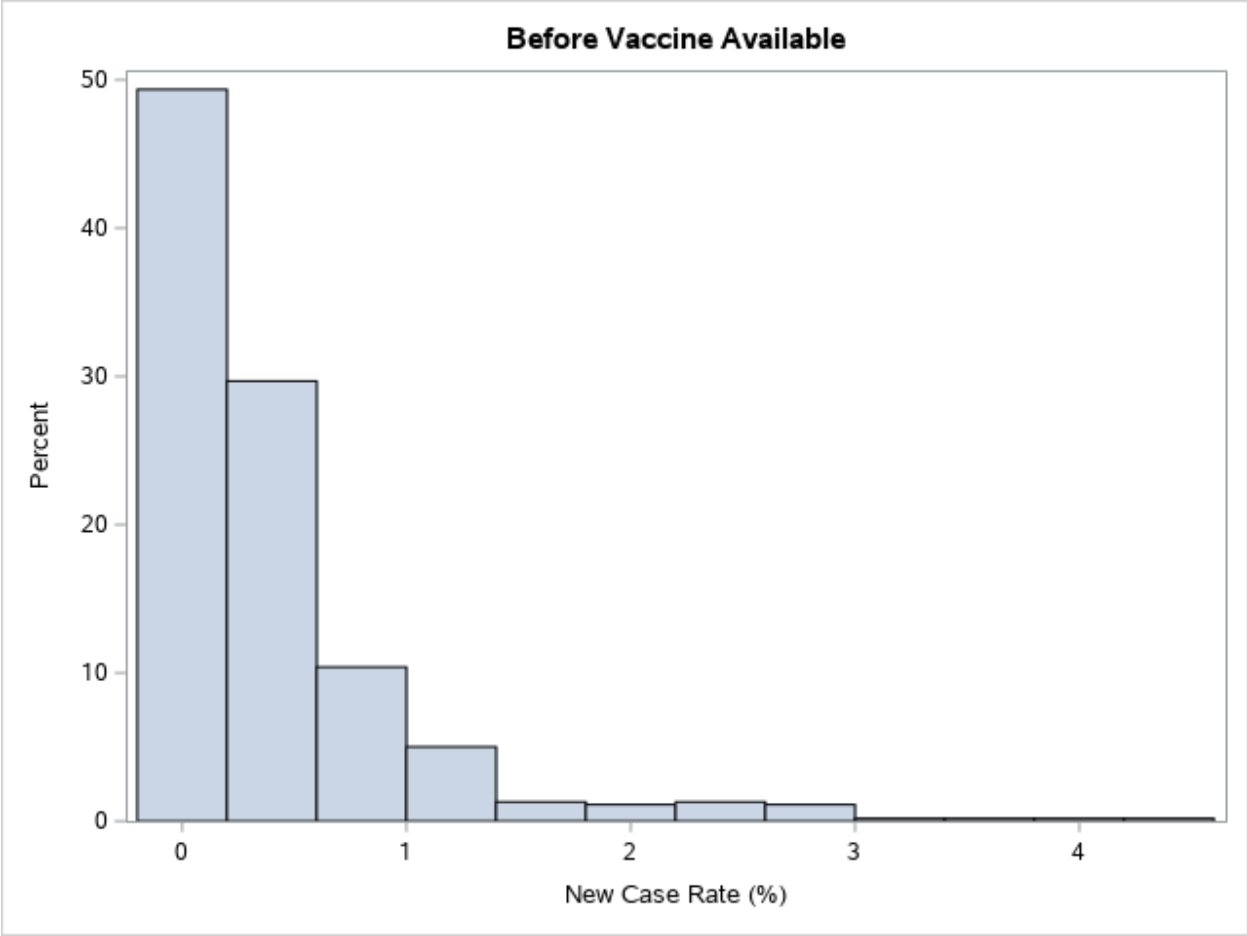
Dependent Variable: new\_death\_rate\_percent New Death Rate (%)

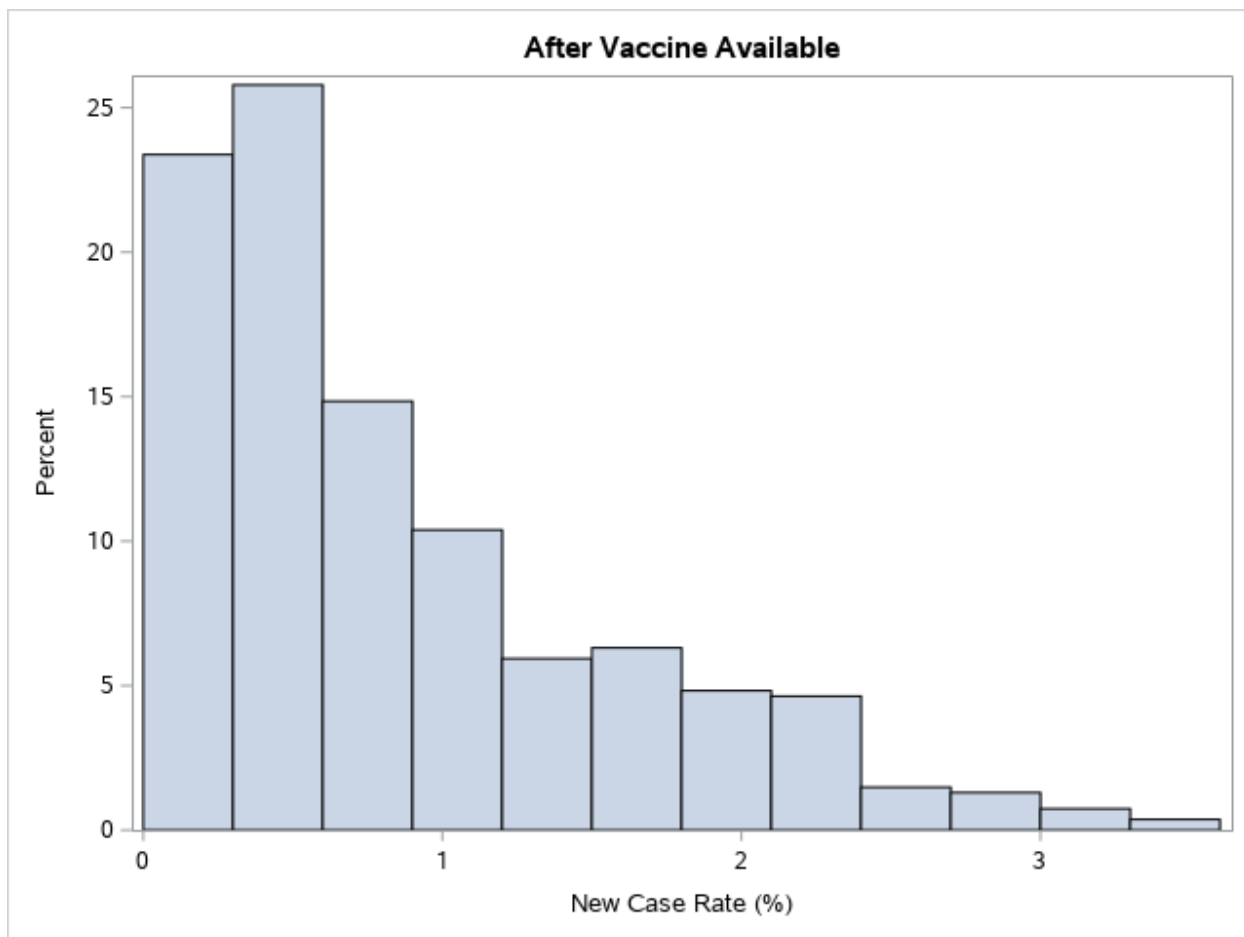


| The MEANS Procedure |       |                        |                    |    |              |              |
|---------------------|-------|------------------------|--------------------|----|--------------|--------------|
| month               | N Obs | Variable               | Label              | N  | Mean         | Std Dev      |
| 20-01               | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 4.6796232E-6 | 0.000025691  |
|                     |       | new_death_rate_percent | New Death Rate (%) | 49 | 0            | 0            |
| 20-02               | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.000051203  | 0.000200143  |
|                     |       | new_death_rate_percent | New Death Rate (%) | 49 | 7.7428289E-7 | 3.4180466E-6 |
| 20-03               | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.0430506    | 0.0436509    |
|                     |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0010174    | 0.0012885    |
| 20-04               | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.2192816    | 0.2206704    |
|                     |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0120132    | 0.0161207    |

| month | N Obs | Variable               | Label              | N  | Mean      | Std Dev   |
|-------|-------|------------------------|--------------------|----|-----------|-----------|
| 20-05 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.2188304 | 0.1513629 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0112353 | 0.0122495 |
| 20-06 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.2348704 | 0.1583585 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0056339 | 0.0041954 |
| 20-07 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.4883821 | 0.3659906 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0070958 | 0.0070773 |
| 20-08 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.3980471 | 0.2182805 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0074000 | 0.0065045 |
| 20-09 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.4147673 | 0.2556934 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0061750 | 0.0042299 |
| 20-10 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.7860898 | 0.5806056 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0086989 | 0.0062581 |
| 20-11 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 1.7132582 | 0.9525782 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0165960 | 0.0116928 |
| 20-12 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 1.9157149 | 0.5528120 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0288628 | 0.0124951 |
| 21-01 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 1.6115385 | 0.5906240 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0270337 | 0.0119467 |
| 21-02 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.6222629 | 0.2066676 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0145738 | 0.0080082 |
| 21-03 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.5033505 | 0.2228607 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0073915 | 0.0037639 |
| 21-04 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.5379624 | 0.2791528 |

| month | N Obs | Variable               | Label              | N  | Mean      | Std Dev   |
|-------|-------|------------------------|--------------------|----|-----------|-----------|
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0048631 | 0.0030524 |
| 21-05 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.2753937 | 0.0999289 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0040812 | 0.0021633 |
| 21-06 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.1251203 | 0.0797702 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0026749 | 0.0012026 |
| 21-07 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.3882812 | 0.3273475 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0027549 | 0.0021941 |
| 21-08 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 1.2433628 | 0.7556476 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0091745 | 0.0090247 |
| 21-09 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 1.3785252 | 0.6293651 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0153337 | 0.0098716 |
| 21-10 | 49    | new_case_rate_percent  | New Case Rate (%)  | 49 | 0.9096919 | 0.5349099 |
|       |       | new_death_rate_percent | New Death Rate (%) | 49 | 0.0126066 | 0.0081717 |





| The MEANS Procedure |       |                        |                    |    |           |           |
|---------------------|-------|------------------------|--------------------|----|-----------|-----------|
| indicator           | N Obs | Variable               | Label              | N  | Mean      | Std Dev   |
| N                   | 14    | new_case_rate_percent  | New Case Rate (%)  | 14 | 1.0515463 | 0.6867853 |
|                     |       | new_death_rate_percent | New Death Rate (%) | 14 | 0.0193878 | 0.0108914 |
| Y                   | 35    | new_case_rate_percent  | New Case Rate (%)  | 35 | 0.8529502 | 0.4604348 |
|                     |       | new_death_rate_percent | New Death Rate (%) | 35 | 0.0098941 | 0.0047337 |

**The UNIVARIATE Procedure**  
**Variable: new\_case\_rate\_percent**  
**indicator=≥ 50% vaccination rate**



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

| Basic Statistical Measures |          |                      |         |
|----------------------------|----------|----------------------|---------|
| Location                   |          | Variability          |         |
| <b>Mean</b>                | 1.051546 | <b>Std Deviation</b> | 0.68679 |
| <b>Median</b>              | 0.690067 | <b>Variance</b>      | 0.47167 |

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

The UNIVARIATE Procedure  
Variable: new\_case\_rate\_percent  
indicator=< 50% vaccination rate

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

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

| The NPAR1WAY Procedure   |    |                  |                      |                     |               |
|--|----|------------------|----------------------|---------------------|---------------|
| Wilcoxon Scores (Rank Sums) for Variable new_case_rate_percent<br>Classified by Variable indicator |    |                  |                      |                     |               |
| indicator  | N  | Sum of<br>Scores | Expected<br>Under H0 | Std Dev<br>Under H0 | Mean<br>Score |
| <b>≥ 50% vaccination rate</b>  | 14 | 354.0            | 350.0                | 45.184806           | 25.285714     |
| <b>&lt; 50% vaccination rate</b>   | 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        |