**Statistical Analysis for The Getting Out the Gunk**

**To: Dr.Bingenheimer**

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**RE: Analysis of LDL Intervention**

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**Section 1:Analysis 1 and 2**

Figure 1 demonstrates that the prevalence of high LDL decreased from 78.9% at baseline to 68.4% at follow-up. However, according to the McNemar Test, this change was not statistically significant. In Figure 2, you can observe shifts in the LDL categories, such as more individuals in the “Near Optimal” and “Borderline High" categories post-intervention, with fewer individuals in the "High” and “Very High" categories High”.

**Figure 1: Dichotomous Pre-Post Intervention**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Pre-Intervention %** | **Post Intervention %** | **Significance Level** |
| **Not High** | **21.1** | **31.6** |  |
| **High** | **78.9** | **68.4** |  |
| **McNemar Test** |  |  | **.052** |

**Figure 2: Ordinal Pre-Post Intervention**

|  |  |  |
| --- | --- | --- |
| **Variable** | **LDL Pre %** | **LDL Post %** |
| **Near Optimal** |  | 4.2 |
| **Borderline High** | 21.1 | 27.4 |
| **High** | 50.5 | 42.1 |
| **Very High** | 28.4 | 26.3 |

**Section 2: Analysis 3 and 4**

In Figure 3, both the Pearson Chi-square test and Fisher’s Exact test indicate a highly significant difference in LDL levels between the control and treatment groups. Based on Figure 4, we can conclude that the intervention significantly reduced the proportion of individuals with high LDL levels in the treatment group compared to the control group. The Mann-Whitney test also suggests a statistically significant difference in the distribution of LDL categories. Overall, these results strongly indicate that the intervention was effective in reducing high LDL levels

**Figure 3: High LDL Post Crosstabulation**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Control %** | **Treatment %** | **Significance Level** |
| **Not High** | **9.5** | **31.6** |  |
| **High** | **90.5** | **68.4** |  |
| **Pearson Chi-Square** |  |  | **<0.001** |
| **Fisher’s Exact Test** |  |  | **<0.001** |

**Figure 4: LDL Categorical Post Crosstabulation**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group** | **Near Optimal %** | **Borderline High %** | **High %** | **Very High %** | **Significance Level** |
| **Control** | **0** | **9.5** | **57.1** | **33.3** |  |
| **Treatment** | **4.2** | **27.4** | **42.1** | **26.3** |  |
| **Mann-Whitney Test** |  |  |  |  | **0.004** |