Data Analysis Process

1. Received data in Microsoft Excel on *N* = xx patients A data sample from ## patients were included in the project.

2. The descriptive variables of age, gender, admission date, and discharge date were collected. In addition, the length of stay was collected.  Variables were reported either as ratio level using means, standard deviation, and range; or as nominal level categories transformed using numerical codes and reported using counts and percentages. The data for *N*  = xx patients were entered into an SPSS version 28 database for descriptive analysis. These demographic and biometric variables were described in the narrative and displayed in a table (see Tables). The categorical data was displayed in a table and graphed using bar charts (see Figures). These data are presented descriptively so frequencies between the groups and overall can be discussed.

3. Parametric statistics like the *t-*test require assessment of four main assumptions: (Please let us know if these need to be assessed in your project)

a. Independence of the observations.  Each score was obtained from one patient.  No variables were shared.

b. No significant outliers in the two groups.  Plots of the variables and Z scores were calculated to check for outliers.  Any z score > 3.0 was considered an outlier due to being 3 times the standard deviation.

c. Normality.  The data for each group’s variables should be approximately normally distributed.  Shapiro Wilk was performed to check normality.  If the *p* < .05, the values are not normally distributed in the dependent variables.  This significance is a violation of normality.

d. Homogeneity of variances.  the variance of each outcome variable should be equal in each group.  Levene’s test was performed to check for the assumption of homogeneity of variance.  If Levene’s test significance value is significant (*p <* 05), the assumption is violated, and the variance is heterogeneous.

e. Violations to assumptions: If the assumption of normality or homogeneity is violated, or outliers are present, then the t-test may not be the most powerful test available, and this could mean the difference between detecting a true difference or not.  A nonparametric test or employing a transformation may result in a more powerful test.

4. Nonparametric tests are completely based on the ranks of the categorical or ordinal data, which are assigned to the ordered data. Nonparametric analyses are used when the outcome is a nominal, ordinal variable or a rank, when there are definite outliers or when the outcome has unclear limits of detection. Non-parametric statistics require that the observations are unrelated to one another. There is underlying continuity in the variable under investigation. They are less sensitive than their parametric counterparts when the assumptions of the parametric methods are met.

**Ok to use this below**

**Put the tables in the manuscript as instructed**

**Example of Narrative and Tables**

Data from xx patients were collected to assess the impact of the QI on the OUTCOME. Two groups were identified using electronic medical records. A comparative group of xx patients was collected before implementation. An implementation group of xx patients was collected after implementing the QI. As noted in Table 1, the mean age (years) of the comparative group was xx years (*SD* = xx), with a range of xx -xx years. The mean age of the implementation group was xx years (*SD* = xx), with a range of xx -xx years.

**Table 1**

*Demographic Characteristics of Patient Sample (N = )*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Baseline characteristic | Comparative | | | Implementation | | | |
|  | *M* | *SD* | *Range* | *M* | *SD* | | *Range* |
| Age (years) | xx | xx | xx - xx | Xx | | xx | xx -xx |

*Note.* *N* =

Gender was described using frequencies and percentages (see Table 2). The comparative group was xx% female and xx% male.

**Table 2**

*Sociodemographic Characteristics of Patient Sample (N = )*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Baseline characteristic | Comparative | | Implementation | |
|  | *n* | *%* | *n* | *%* |
| Gender |  |  |  |  |
| Male | xx | xx% | xx | xx% |
| Female | xx | xx% | xx | xx% |

*Note.* *N* =

**Table 3**

*Paired t-Tests Between Pre and Post Implementation Groups*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Pre Implementation  (*n =* ) | | Post Implementation (*n =* ) | |  |  |  |
|  | *M* | *SD* | *M* | *SD* | *t* | | *p* |
| Length of Stay (days) | xx | xx | xx | xx | xx | | xx |
|  |  |  |  |  |  | |  |

*Note:* \**P < .*05 -statistically significant, *M -*mean, *SD –* standard deviation