The purpose of this project was to identify heart failure trends within a given population based on the available data sets. The team utilized two different data sets analyzing death rates, age, location, gender, and other medical conditions. The team set out to understand and answer the following questions from the given data sets:

Research questions:

1. Is Cardiovascular mortality rates trending up or down over the years? How the U.S. compared to other countries?
2. Are patients with underlying medical conditions such as Diabetes or depression more likely to have cardiovascular disease?
3. Are there trends/outliers based on low blood count (RBC, WBC, Platelets), high Cholesterol, High BP?
4. How does our Blood Pressure levels lead to Heart failure? Does Sodium, potassium, and chloride levels play a part?
5. Does location factor in mortality rates by patients? Gender breakdown?
6. What percent of Heart failure patients have a family history of cardiovascular conditions?

Based on the research and data available we were able to successfully analyze and interpret these questions. Our research supports that patients with a family history of cardiovascular conditions had an 80% chance of heart failure. We also uncovered that patients with other medical conditions such as depression and hyperlipidemia had higher than normal chance of experiencing heart failure. Patients with Hyperlipidemia are at a higher risk for heart failure when they are 40 years of age and only increase as they get older. While smoking puts everyone at risk for other health concerns those with cardiovascular conditions see an increase in risk once they are 50 years and older. While men do have a higher mortality rate than women it’s interesting to note location, those in a rural area see increase in mortality once they are 60+ years of age. When we viewed holistically all the data within the US and its surrounding countries, we see that year over year the number of deaths continue to raise, the US at a higher rate than most.

Based on other trends the team was able to identify we have concluded that mortality rates in the US will continue to raise as more and more health conditions are linked for higher risk.