ESTEFANIA JIMENEZ GARCIA
A01635062
NUMERICAL METHODS
4 JUNE 2020

Tecnológico de Monterrey

Statistics Report Covid19

Mexico

Coronavirus disease 2019 (Covid19) is an infectious disease that was identified in December 2019 in Wuhan, China. It is caused by severe acute respiratory syndrome coronavirus 2(SARS-CoV-2) this disease spread through the world creating a pandemic infecting as 4 June 2020, more than 6.56 million cases across 188 countries. This has result in more than 387,000 deaths and 2.83 million people has recover from covid19.

In Mexico covid19 was first was identified in February 2020 in Mexico City. To this day as 4 of June 2020 we have 101,238 confirm cases of covid19 with 11,729 deaths and 73,271 people has recover.

Using the data provided by the Federal Government under its Healthcare Department, I will analyze the data and provide with visual representation to identify the main factors that can cause complications of this disease according to past cases in Mexico. I am using Pandas which is a library for python used in Data Science and for the visual representation I will use the library Matplotlib.

Data base

I decided to gather 3 type of data:

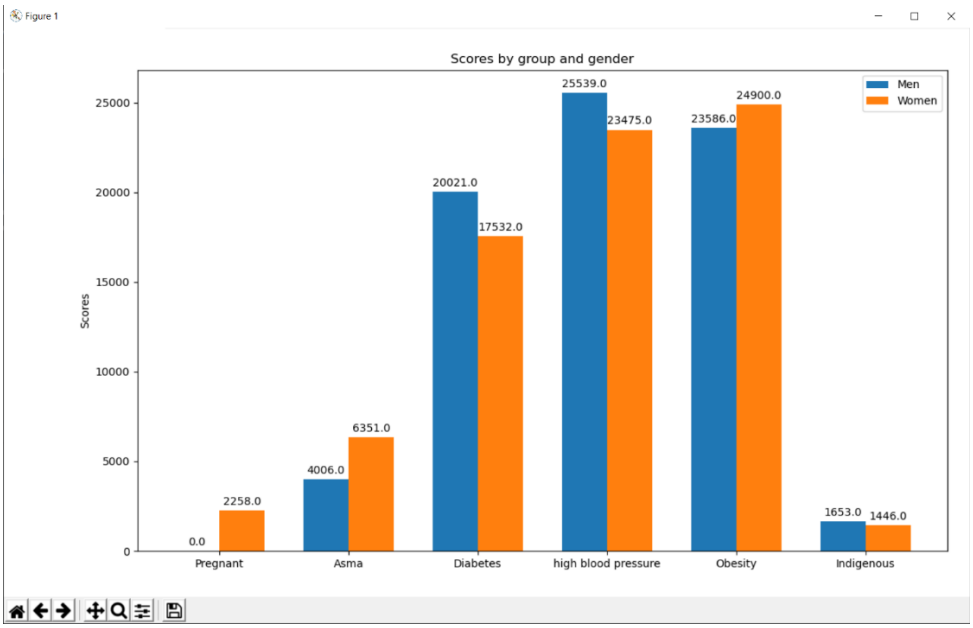
- General data: Information from all the patients of the data without any type of classification
- Female data: Information to represent how the main diseases that cause complication in covid19 affected the female population. These diseases are: Asma, Diabetes, High Blood Pressure, Obesity. I got how many infected female patients also had these diseases and how many had to go to intensive care due to complications. I also gather information from pregnant female patients and indigenous patients
- Male data: Information to represent how the main diseases that cause complication in covid19 affected the male population. These diseases are: Asma, Diabetes, High Blood Pressure, Obesity. I got how many infected male patients also had these diseases and how many had to go to intensive care due to complications.

I saved this data into a txt called: “results.txt” that should be in the zip, but here is how this txt looks:

```
Mean of age: 42.61859982666731
Younger Patient: 0.0
Older Patient: 120.0
Standard Derivation Age: 16.834245723255417
Infected of covid19 in Mexico: 293078.0
Patients that needed Intensive Care: 6047.0
General data Female
Total Female Infected of covid19: 143427.0
Mean Female: 42.013205323962715
Pregnant data Female
Total Female Pregnant Infected of covid19: 2258.0
Female Pregnant that needed Intensive Care: 47.0
Total Female Asma Infected of covid19: 6351.0
Female Asma that needed Intensive Care: 85.0
Female Asma that develop Pneumonia: 745.0
```

```
Total Female diabetes Infected of covid19: 17532.0
Female diabetes that needed Intensive Care: 710.0
Total Female high blood pressure Infected of covid19: 23475.0
Female high blood pressure that needed Intensive Care: 778.0
Total Female obesity Infected of covid19: 24900.0
Female obesity that needed Intensive Care: 591.0
Total Female indigenous  Infected of covid19: 1446.0
Female indigenous that needed Intensive Care: 37.0
Total Male Infected of covid19: 149651.0
Mean Male: 43.19881591168786
Total Male Asma Infected of covid19: 4006.0
Male Asma that needed Intensive Care: 73.0
Male Asma that develop Pneumonia: 596.0
Total Male diabetes Infected of covid19: 20021.0
Male diabetes that needed Intensive Care: 1126.0
Total Male high blood pressure Infected of covid19: 25539.0
Male high blood pressure that needed Intensive Care: 1188.0
Total Male obesity Infected of covid19: 23586.0
Male obesity that needed Intensive Care: 915.0
Total Male indigenous  Infected of covid19: 1653.0
Male indigenous that needed Intensive Care: 67.0
```

Graphs

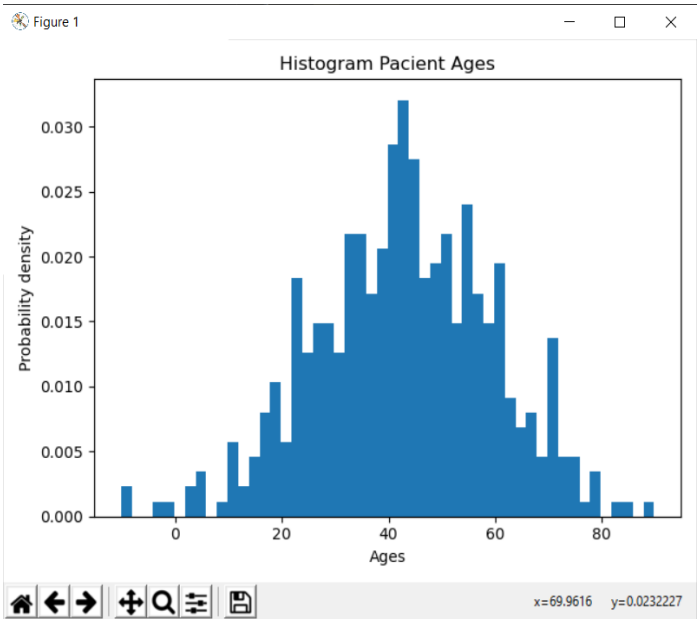


This graph represents a comparation between how many patients that had another disease that could cause complications were female or male.

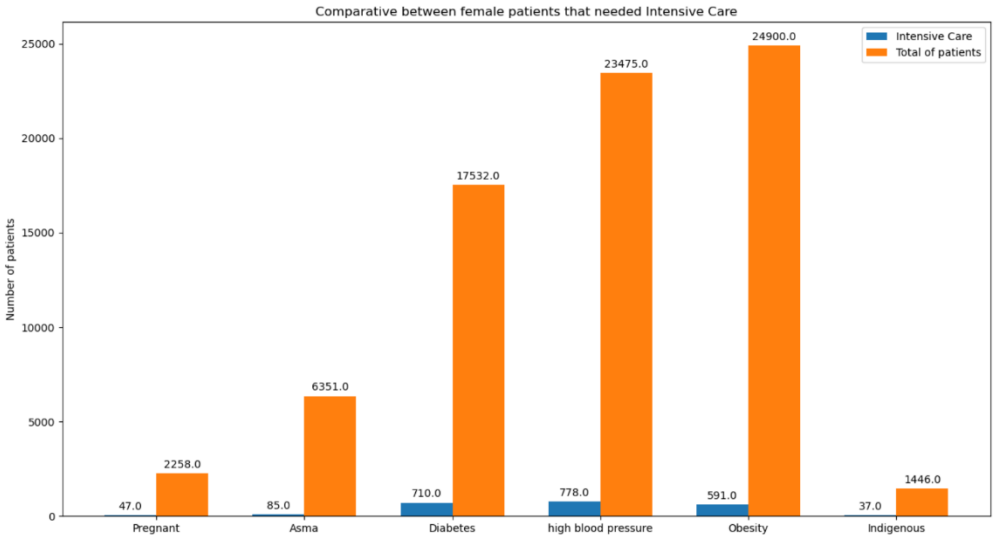
I also included indigenous patients since they are a sector of the population who has been heavily affected form this pandemic.

ESTEFANIA JIMENEZ GARCIA
A01635062
NUMERICAL METHODS
4 JUNE 2020

Tecnológico de Monterrey



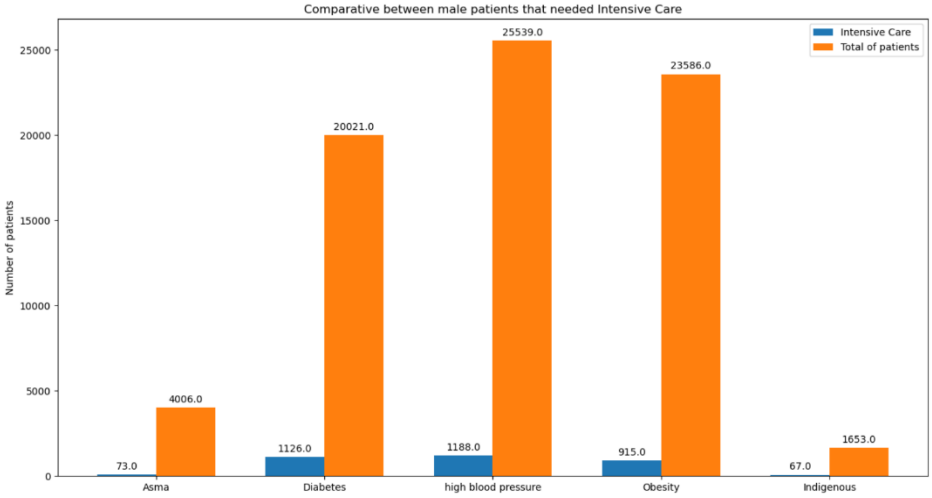
This graph is a histogram of the patients ages using the standard deviation of distribution, the mean, and the youngest and oldest patients.



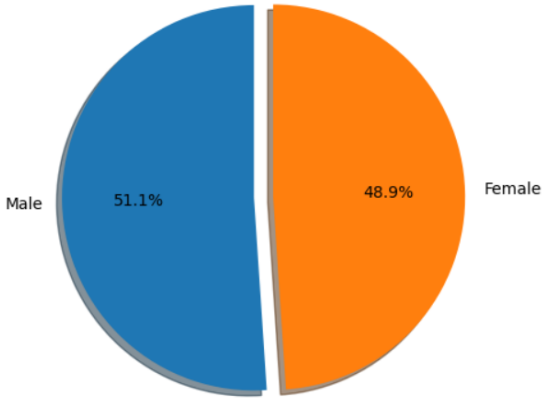
This graph represents the comparative between how many women that has a disease that could complicate their health by covid19 needed intensive care to recover.

ESTEFANIA JIMENEZ GARCIA
A01635062
NUMERICAL METHODS
4 JUNE 2020

Tecnológico de Monterrey



This graph represents the comparative between how many men that has a disease that could complicate their health by covid19 needed intensive care to recover.



This pie chart represents the percentages of female and male patients in Mexico.

Conclusion

After gathering all the information and seeing the graphs I can conclude that this pandemic has affected in the majority the male population since the male patients tend to have other diseases that can increase the risk of covid19.

Also after a research of comparing the data that I got and the data that is show mostly on the media are way different, so I decided to open the data on a excel and search for inconsistency data and I found a lot of data that truly did not made sense. In the female section mostly of the pregnant women are over 50 and there were a lot of patients over 100 years old. This only shows that the data given is probably not supervised nor reliable.

References

W. (2020, June 03). Coronavirus disease 2019. Retrieved June 05, 2020, from https://en.wikipedia.org/wiki/Coronavirus_disease_2019

colaboradores de Wikipedia. (2020, June 5). Pandemia de enfermedad por coronavirus de 2020 en México - Wikipedia, la enciclopedia libre. Retrieved from

https://es.wikipedia.org/wiki/Pandemia_de_enfermedad_por_coronavirus_de_2020_en_M%C3%A9xico