# HEALTHCARE INSIGHTS ANALYSIS

COMPREHENSION OF DISPENSATION OF DISEASES, SYMPTOMS PATIENT CHARACTERISTICS.

The fundamental goal of unveiling Healthcare Insight is to comprehend the distribution of diseases, symptoms and patient attributes. The core objective of this Exploratory Data Analysis (EDA) to use data to shed light on these crucial aspects of healthcare by uncovering the of various diseases, the diverse spectrum of symptoms they present, and the intricate demographic as well as gaining insights into the complex web of factors that influence healthcare outcomes. By systematically examining data, EDA aim to exploring the intricate relationships within healthcare data, and identifying patterns and trends. Enhancing medical knowledge is one of the major aspect of this insight, this comprehension serves as the cornerstone for informed medical decision-making
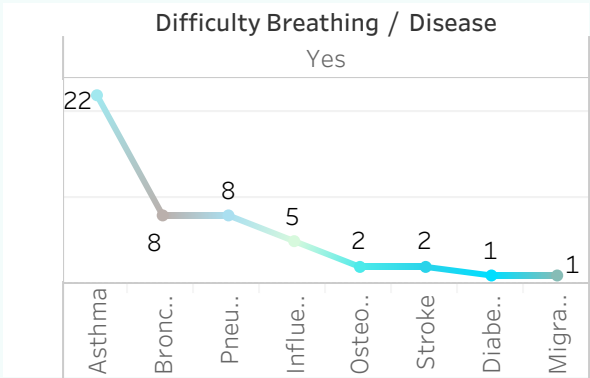
PATIENT
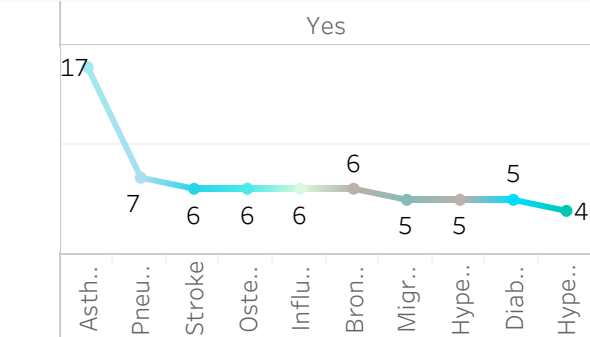
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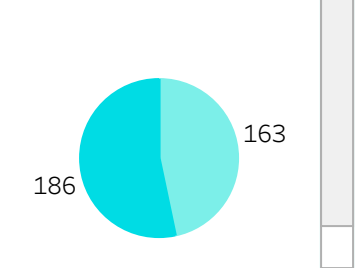
Outcome Variable
- Negative
- Positive

186 | 163

DISEASE PREVELANCE: In a Total of 349 Patients, The following diease are the top 5 dominant spread of diseases within the disease group. Asthma affected is 6.5%, Stroke 4.5%, Osteoporosis 4%, diabetes and hypertension each affected 2.8%
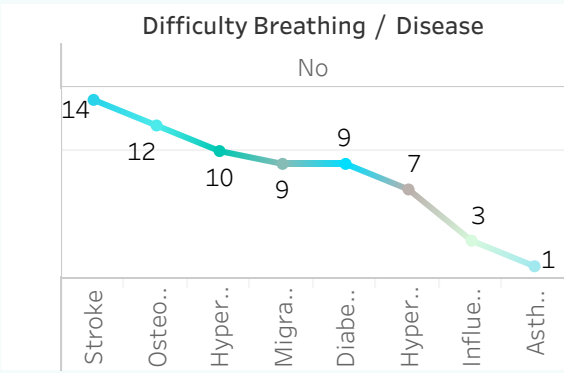
SYMPTOMS INFLUENCE ON DISEASE

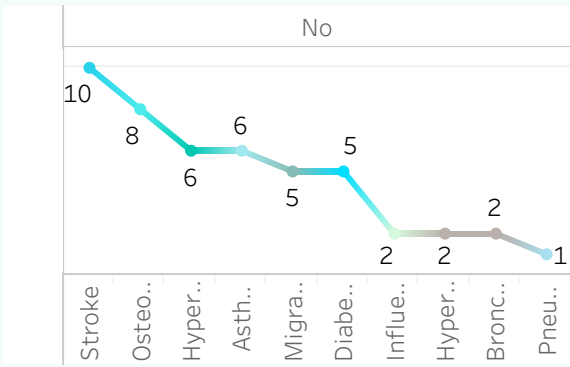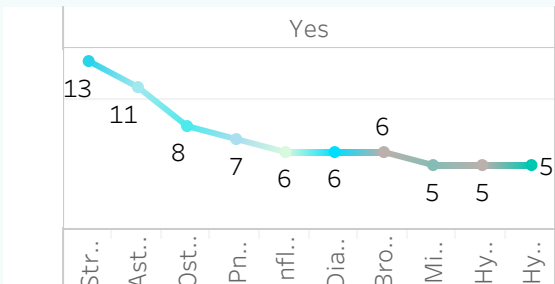### Difficulty Breathing Positive

Cough Positive

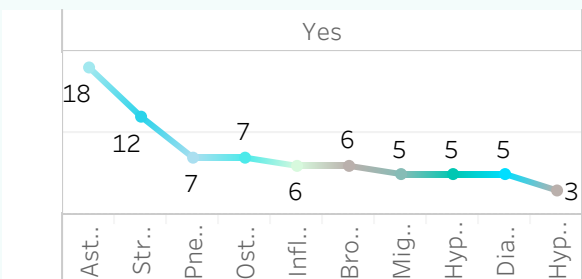### Difficulty Breathing Positive

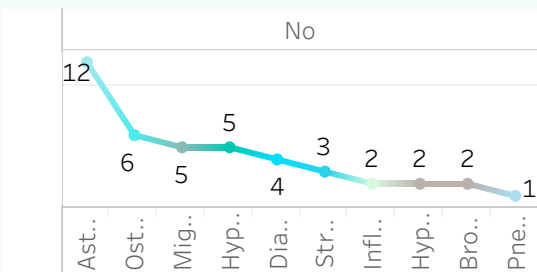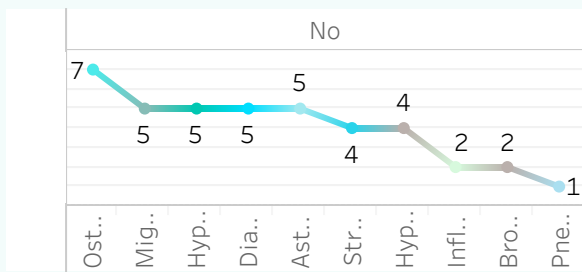### Cough Negative

Fatigue Positive

Fever Positive

Fatigue Negative

Fever Negative

PATTERNS AND TRENDS

ASTHMA: Patient with asthma symptoms experiences the highest range of respiratory symptoms; difficulty in breathing and coughing as well as fatigue and fever. This interpret that the symptoms has a positive influence on Asthma Disease.

STROKE: Paient with stroke also known as a cerebrovascular accident, from the above symtomps the patient experience fatigue also known as w..

OSTEOPOROSIS: Patient diagonised of osteoporosis have an average postive effect of the above symptom with no respiratory symptoms like difficulty in breathing and cough but tend to develop an average symptoms of fatigue and fever.

DIABETES: Patient with diabetes symptoms is experiencing a medical condition characterized by abnormal blood glucose.The above symptom patient with diabetes disease only manifested an average level fatigue symptom with no negative respiratory symtoms.
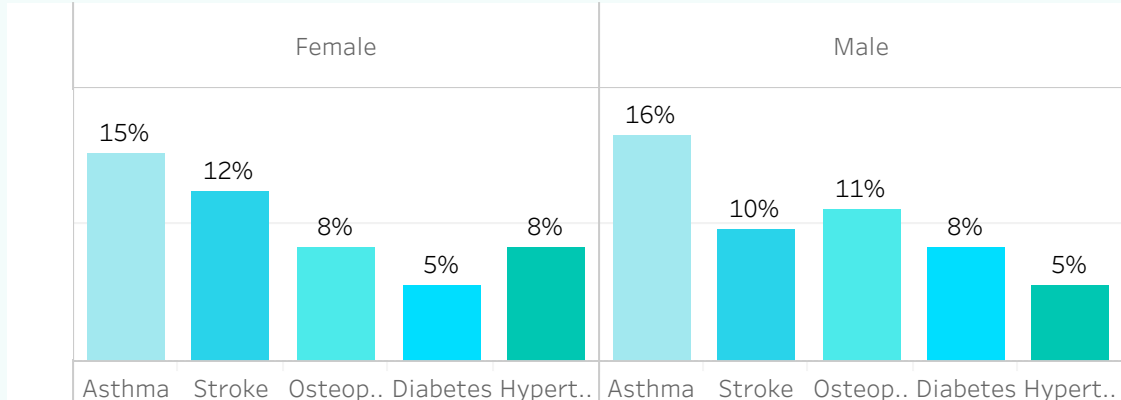
HYPERTENSION: Patients with hypertension, commonly known as high blood pressure, have a medical condition characterized by elevated blood pressure levels. Symptom associated with hypertension patient are low level fatigue and fever.

PATIENT DEMOGRAPHICS

AGE DISTRIBUTION
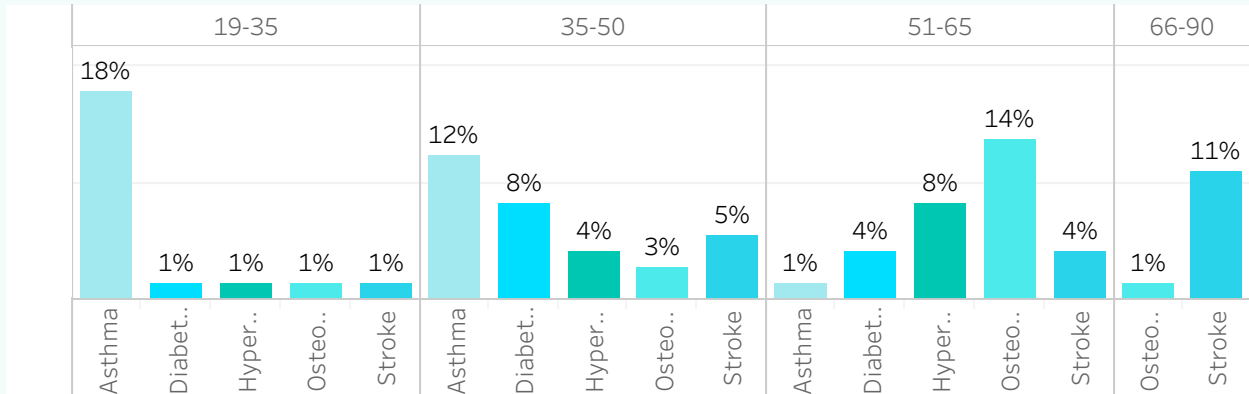
GENDER

AGE DEMOGRAPHIC ANALYSIS
Ages 19-35: Diseases, 23% Postive Outcomes.
Ages 35-50: Diseases, 32% Postive Outcomes.
Ages 51-65: Diseases, 31% Postive Outcomes.
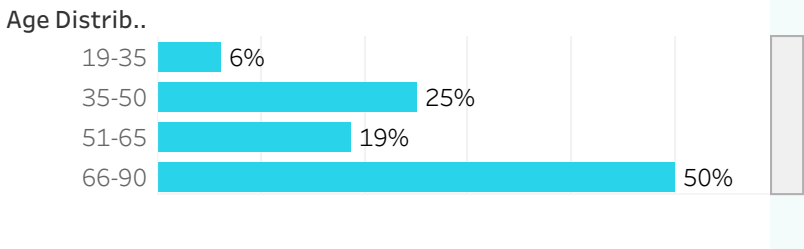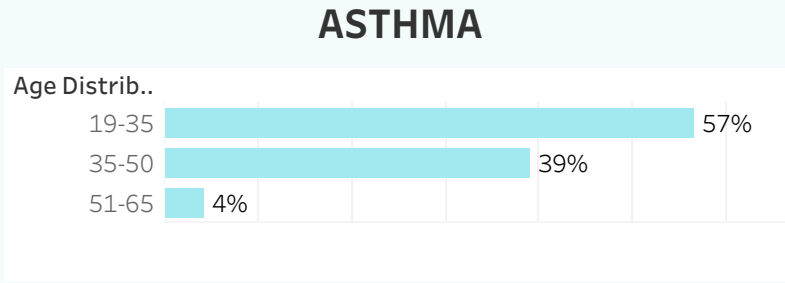Ages 66-90: Diseases, 12% Postive Outcomes.

AGE PREVALENCE: From the disease outcome
AGE 19-35 Have Asthma as the dominant disease at 18%.
AGE 35-50 Also Have Asthma as the Predominat disease at 12%,
AGE 51-65 have Osteoporosis as the highest at 14%
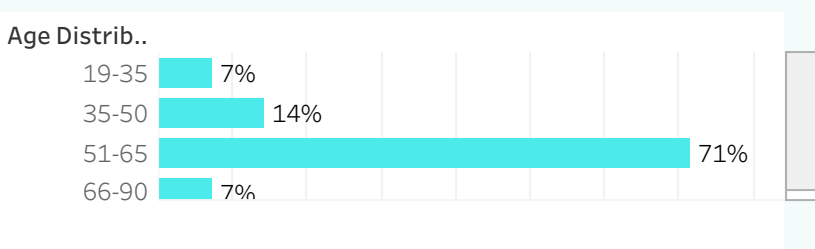while AGE 66-90 have Stroke as the dominant disease at 11%

DISEASES PREVALENCE BY GENDER: The pattern and prevalence of the top 5 dominant disease in different gender, It invoves how diseases affect males and females differently, which can be crucial for understanding the epidemiology of diseases and tailoring healthcare interventions. The Male gender tend to experence more of the prominent diseases 52% than the female gender 48%

AGE PREVALENCE

ASTHMA

STROKE DISTRIBUTION

OSTEOPOROSIS DISTRIBUTION

CHOLESTEROL & BLOOD PRESSURE

ASTHMA & BLOOD PRESSURE: High Blood Pressure and Cholesterol are dominant disease manifested among Asthma patients, Both asthma and hypertension are associated with chronic inflammation and respiratory disease indicating a link between both disease.

STROKE & BLOOD PRESSURE: Patient with stroke tend to have both high cholesterol and high blood presurre, indicating a possible correlation between these factors as well as the relationship between the two is well-established. Hypertension is a significant risk factor for stroke

OSTEOPOROSIS & BLOOD PRESSURE: Patient diagonsed of Osteoporosis tend to have both cholesterol and high blood pressurE as its a disease common among the older age. Two distinct medical conditions, but they can be linked indirectly through various factors.

CHOLESTEROL

Disease	Cholesterol Level		
	Normal	High	Low
Asthma	16	6	1
Bronchitis	3	5	
Diabetes	2	7	1
Hypertension	4	3	3
Hyperthyroidism	4	3	
Influenza	6	2	
Migraine	5	4	1
Osteoporosis	7	6	
Pneumonia	5	3	
Stroke	3	10	3

STROKE: 10 Cases from high cholestorol level, 11 high blood pressure.

DIABETES: 7 Cases with high cholesterol, 4 Cases with high blood pressure

BLOOD PRESSURE

Disease	Blood Pressure		
	Normal	High	Low
Asthma	17	5	1
Stroke	5	11	
Osteoporosis	6	7	1
Diabetes	5	4	1
Hypertension	4	5	1
Migraine	5	4	1
Bronchitis	1	6	1
Influenza	5	2	1
Pneumonia	5	3	
Hyperthyroidism	4	3	

ASTHMA: 6 cases with high cholesterol, 5 cases with high blood pressure.

OSTEOPOROSIS: 6 Cases with high cholesterol, 7 Cases with high blood pressure

INFLUENCING ELEMENTS OF DISEASE AND RECOMMENDATION

Symptom as a element influencing diseases: Recognizing and understanding the symptoms of a disease is often the first step in its diagnosis. Symptoms like Cough, Difficulty in breathing are the dominant in Asthma, Pneumonia and Bronchchitis Diseases. Medical Professional recognizing and understanding these symptoms signs can encourage individuals to adopt preventive measures, such as lifestyle changes, vaccinations, or regular screenings, to reduce their disease risk. Understanding these factors is crucial for disease prevention, early detection, and effective management.

Age as an element influencing diseases: Patient with in the age with the age distribution of 66-90 are prone to disease such as Stroke, Osteoporsis , Diabetes, hypertension are mostly common older age group.The varable outcome showed positive outcome . Medical Proffesional should encourage regular healthcare check-ups, preventive measures, prescriptions, medications, and healthy lifestyle choices can help mitigate some of these age-related disease risks and promote overall well-being as people grow older.

Cholesterol and Blood Pressure: Patients suffering from both high blood pressure are cholesterol have an high chance of developing Diabetes, Stroke, Osteoporosis and Asthma. Medical professional should encourage there patient to change there lifestyle, such as adopting a heart-healthy diet, engaging in regular physical activity, maintaining a healthy weight, and avoiding smoking, can help control cholesterol levels and blood pressure.

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