

The background features a dark blue gradient with a white line graph. The graph has four data points connected by lines. The first point is at the top left, the second is lower, the third is at the bottom, and the fourth is slightly higher. A blue dot is positioned near the third point, with the number '289.33' next to it. Faint vertical lines and a grid pattern are also visible in the background.

Dissertation Presentation

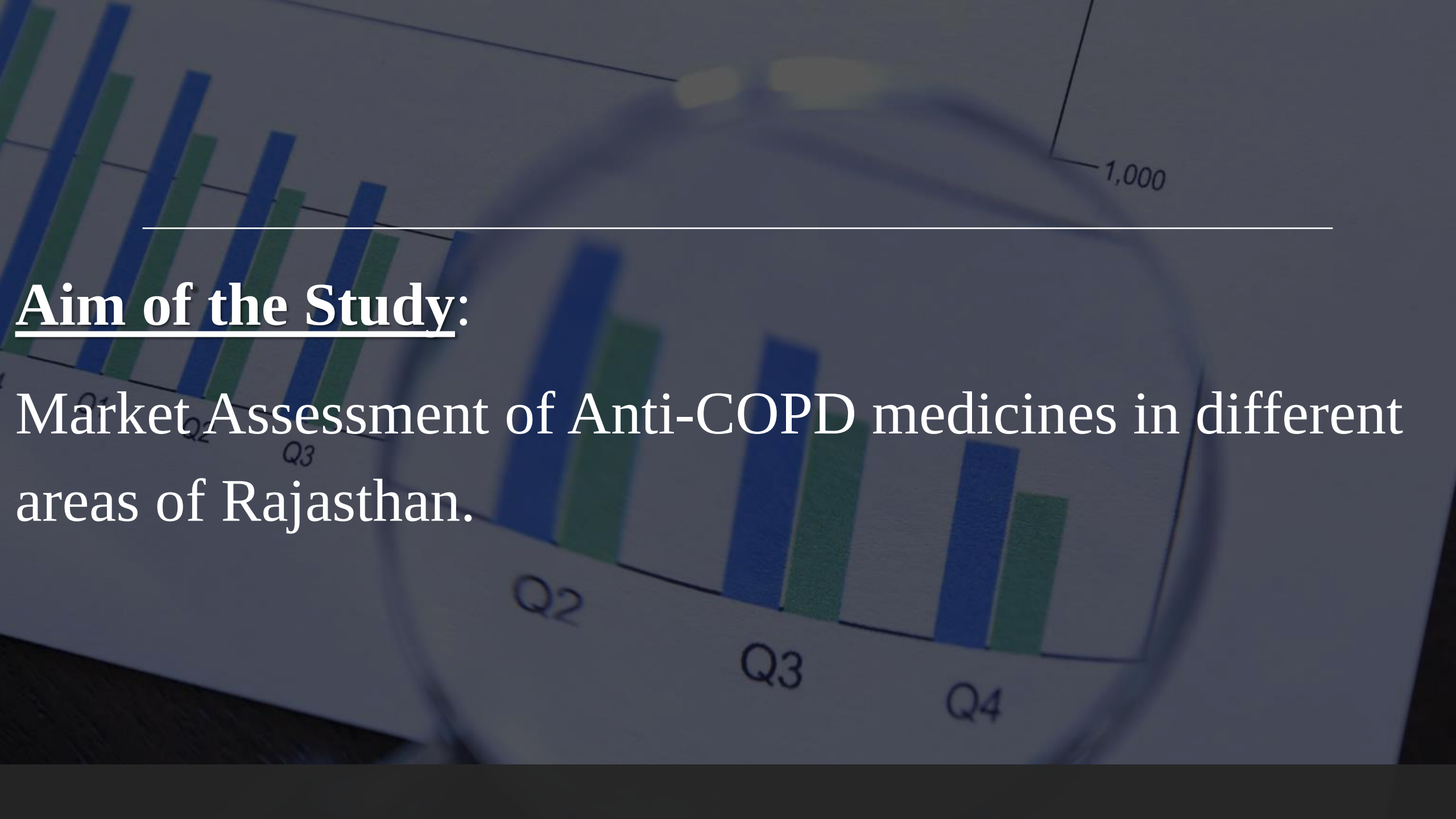
PRESENTED BY:

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PM10

ENROLL NO.:

IIHMR-U/02/2018-20/0125



Aim of the Study:

Market Assessment of Anti-COPD medicines in different areas of Rajasthan.



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What is COPD?

COPD (Chronic Obstructive Pulmonary Disorder) is a common, preventable and treatable disease that is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases (GOLD 2019).

Significance of terms:

- **Common-** It tells us that COPD is a highly prevalent disease
- **Preventable and treatable-** It tells us that COPD can be prevented if the risk factors, especially cigarette smoke are avoided and it is treatable with the new treatments available.
- **Persistent airflow limitation-** It tells us that there is a constant obstruction of air in airways

Burden of COPD

The Global Burden of Disease (GBD) Study Report 2017 reveals that after Ischemic Heart Disease, COPD is the second leading cause of disease burden in India. In India, COPD contributes to 75% of the total healthy life years lost due to disease due to any Respiratory Disease.

Across the Globe there are roughly **384 million COPD cases** worldwide (GOLD 2019 report)

COPD in Indian States:

- ❑ Uttar Pradesh and Maharashtra are the leading states for COPD burden in India.
- ❑ Rajasthan and Uttar Pradesh have the highest population affected that have lost healthy life years due to a compromised health state due to COPD.
- ❑ Rajasthan and Uttar Pradesh have the highest mortality rates due to COPD in India.
- ❑ Leading hazard factors for COPD in India are air contamination (53.7%), tobacco use (25.4%) and word related hazard (16.5%).

COPD Disease Burden in Rajasthan



PARAMETERS	RATES or RATIO
COPD Prevalence	4500 cases per 1 lakh population
State rank in prevalence	8 th
Mortality Rate(COPD Death Rate)	111 per 4500 cases
State Rank in Mortality Rate	1 st
DALY's (Disability Adjusted Life Years)	2570 cases per 1 lakh population
State rank in DALY's	1 st

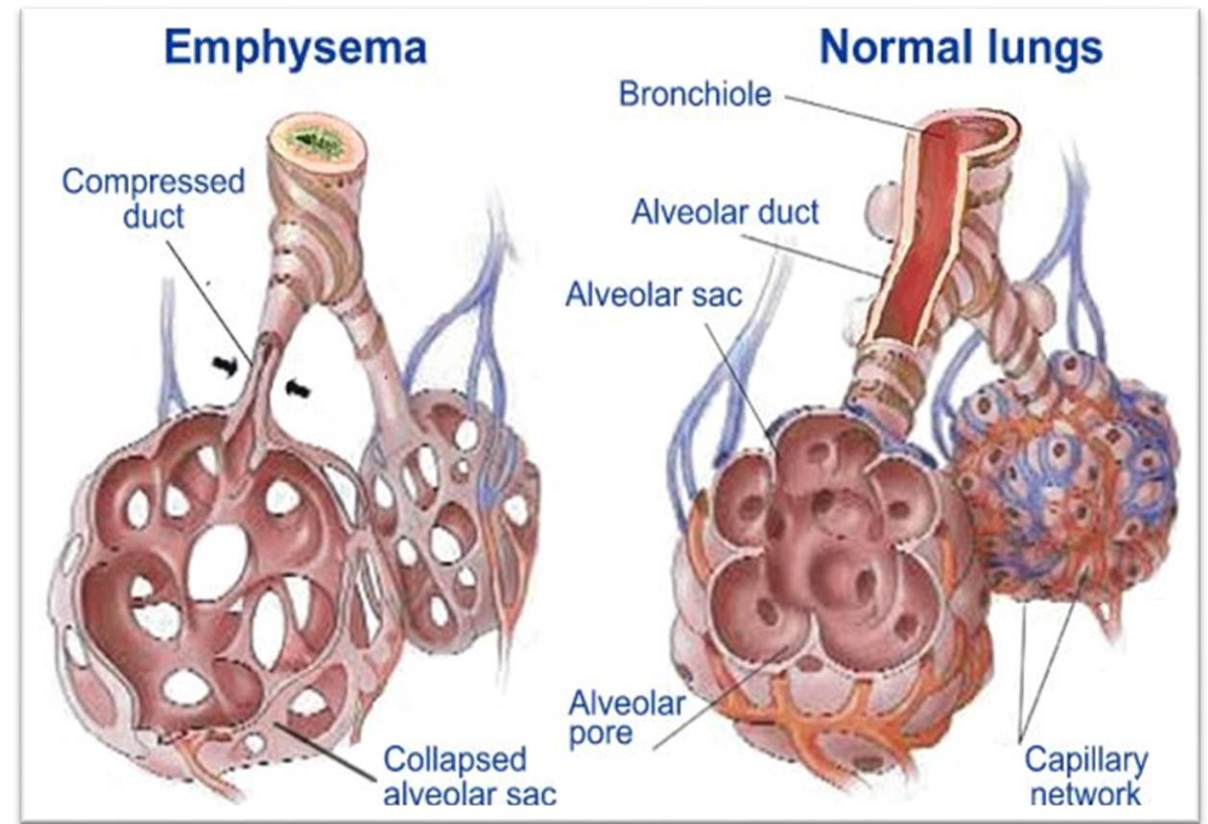
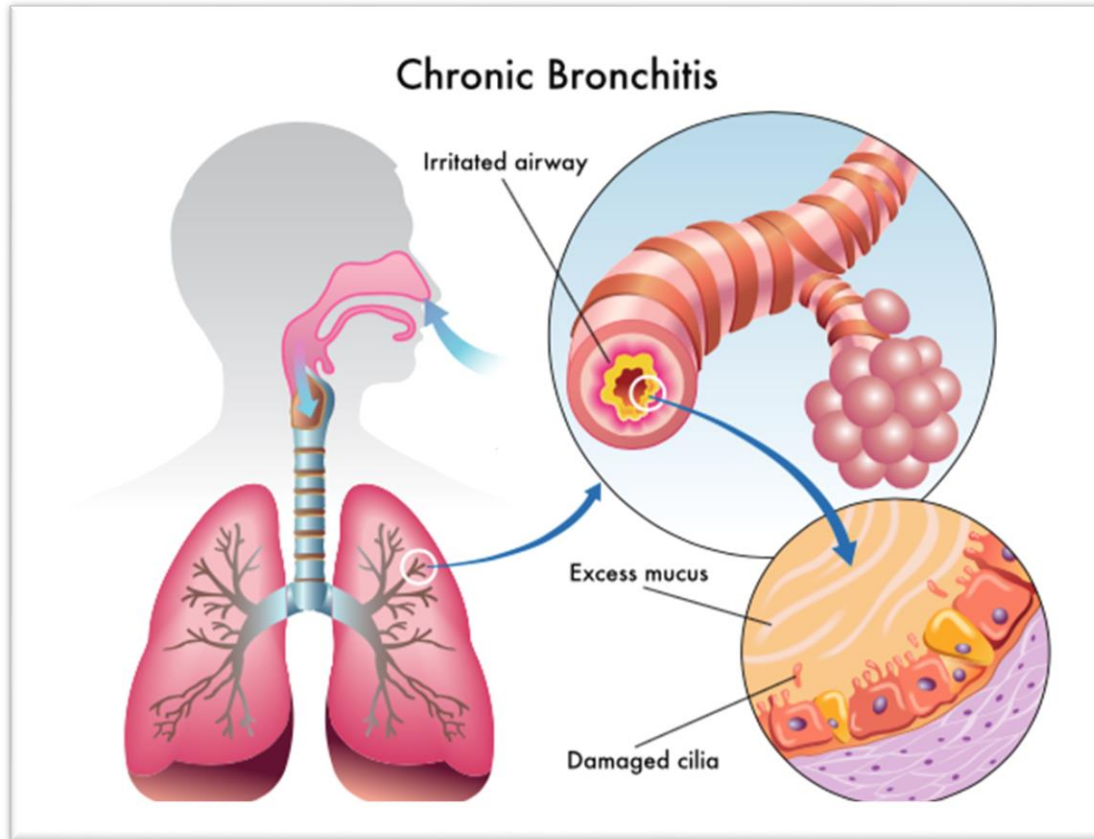
Overview of COPD

Chronic Bronchitis and Emphysema are the two most common conditions that contribute to COPD. These two conditions usually occur together and can vary in severity among individuals with COPD.

Chronic bronchitis is defined by a productive cough on most days for at least three months for at least two consecutive years and which cannot be attributed to other pulmonary or cardiac causes.

Emphysema is characterized by destruction of alveolar walls, resulting in abnormal enlargement of airspaces and loss of lung elasticity, with consequent obstruction of peripheral airways.

Continuation

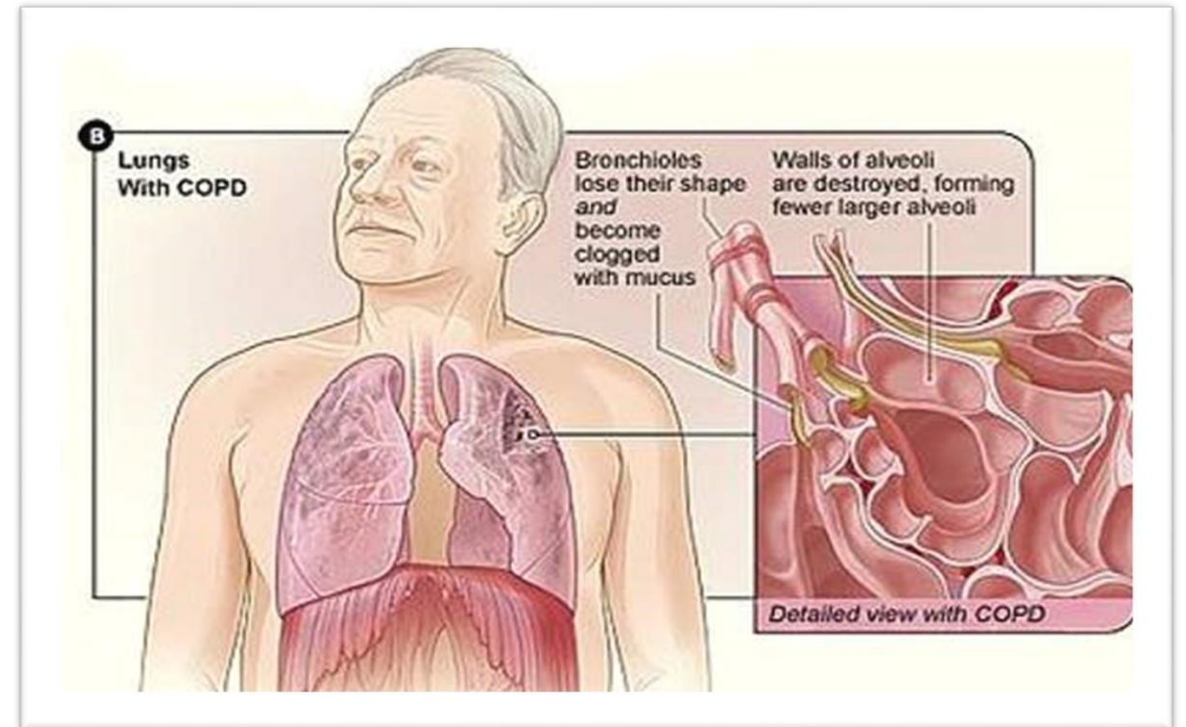
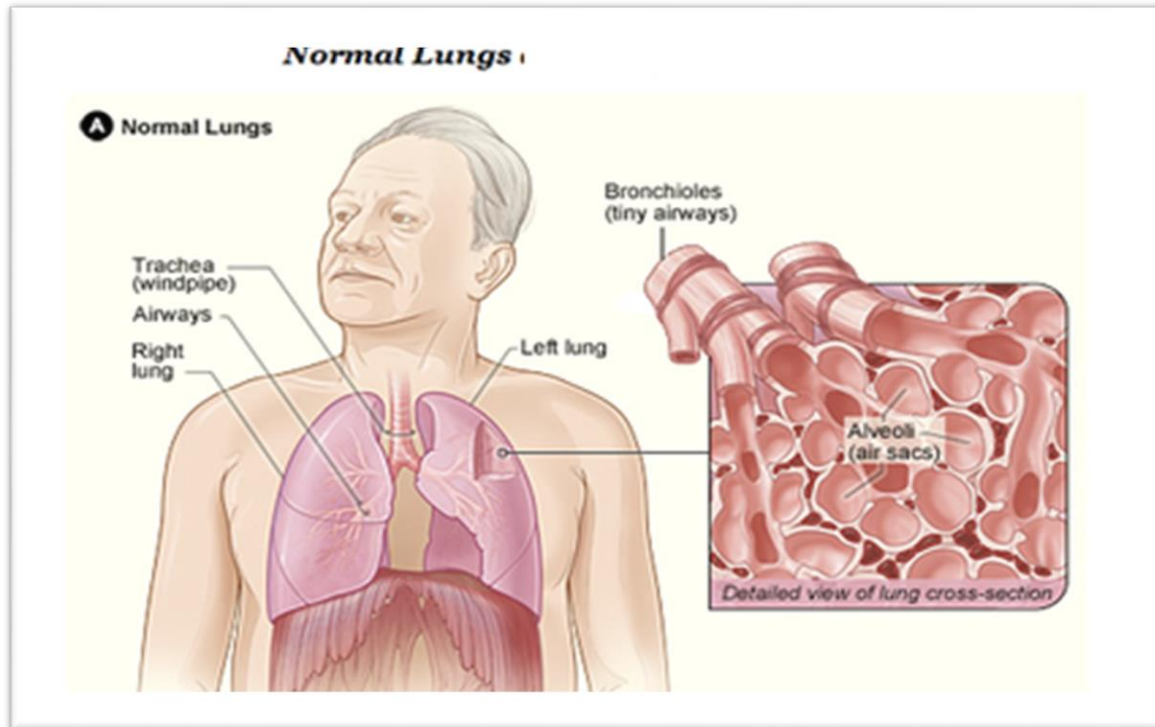


Diagnosis

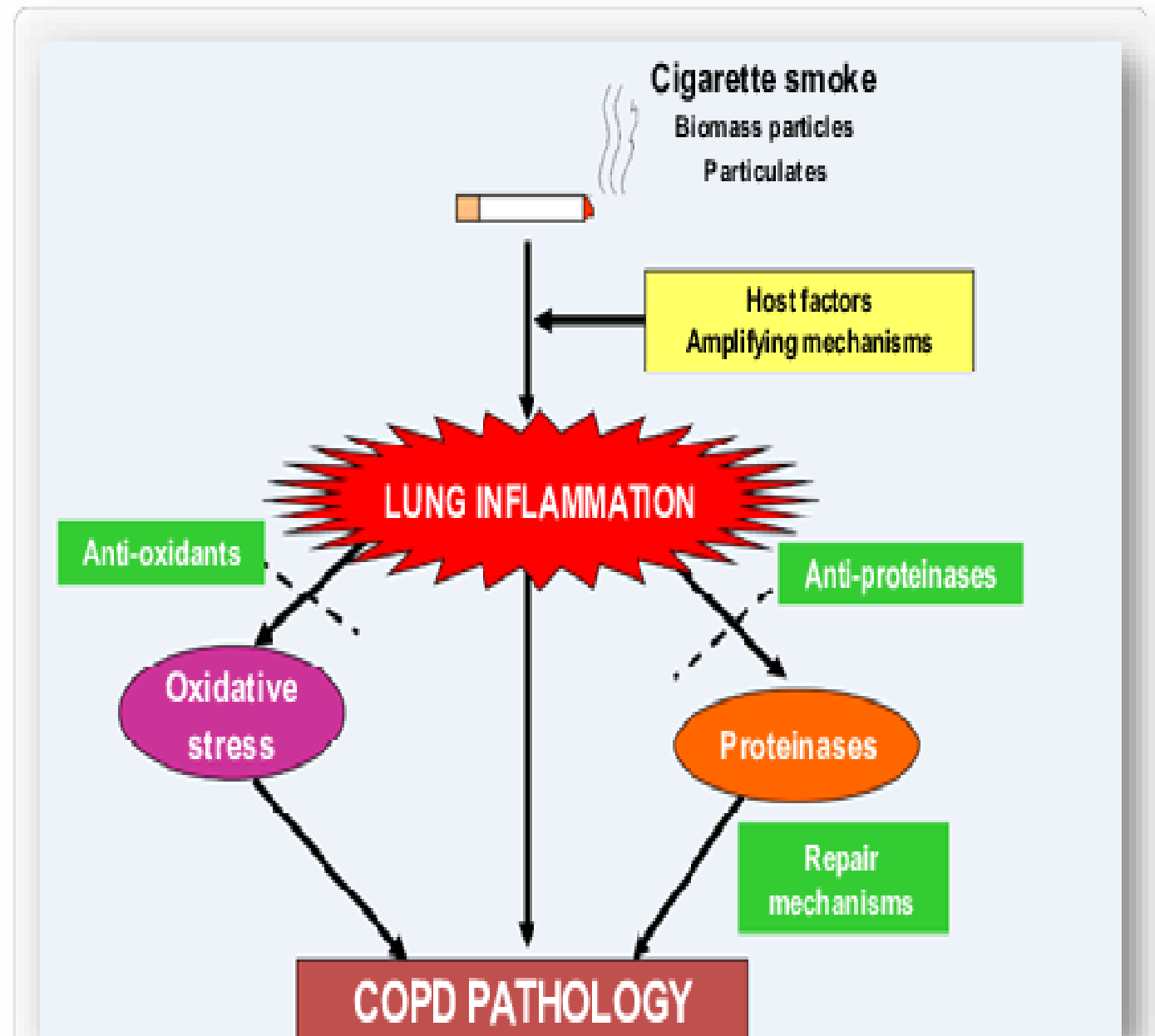
A COPD diagnosis is confirmed by a simple test called spirometry, which measures how deeply a person can breathe and how fast air can move into and out of the lungs. Such a diagnosis should be considered in any patient who has symptoms of cough, sputum production, or dyspnea (difficult or labored breathing), and/or a history of exposure to risk factors for the disease.



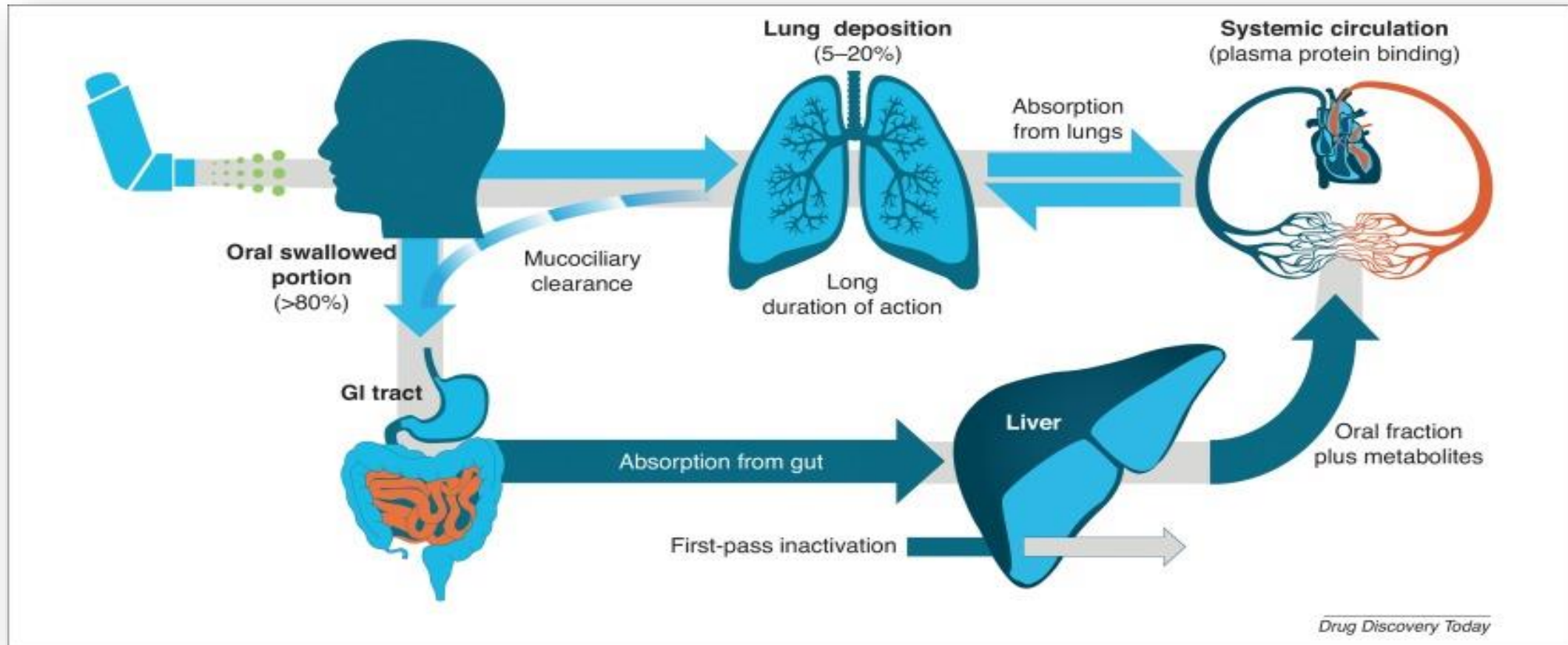
Normal Lungs v/s Lungs affected with COPD



Pathophysiology of COPD



MOA of Anti-COPD Medicines



Rationale of the Study

The study was conducted on the basis of the **questionnaire** that is prepared. That questionnaire was forwarded to various doctors in **Jodhpur, Pali and Bhinmal** districts of Rajasthan.

A dataset was also assigned by the company where the various survey data along with the data of the doctors was present which particularly served for the completion of the market assessment.

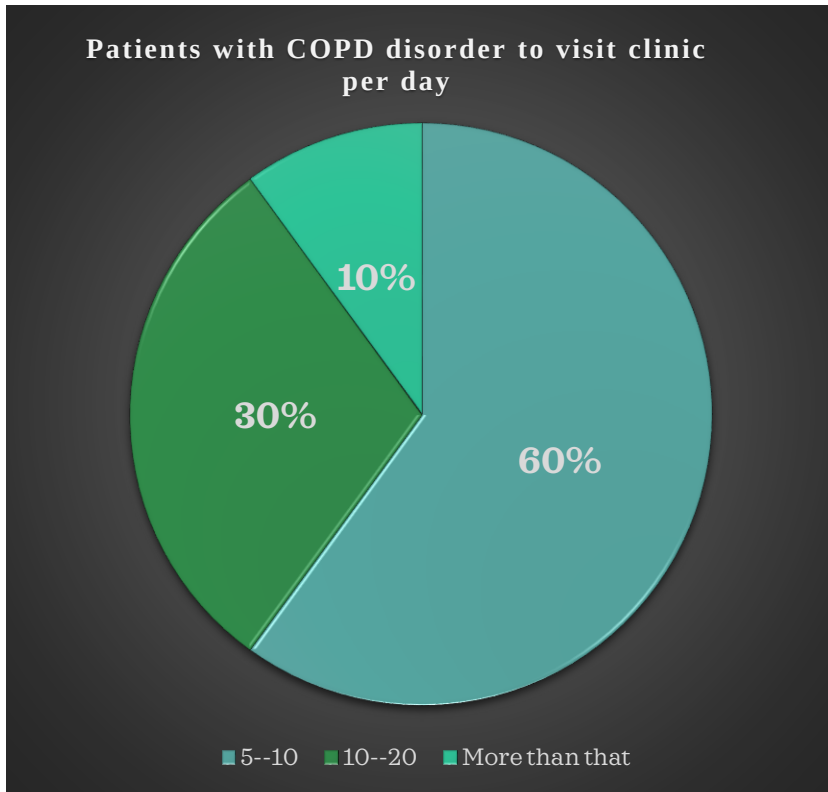
The Market Assessment provides information on:

- ❑ The parameters utilized by the doctors to prescribe a particular medicine for COPD
- ❑ The widely seen symptoms for COPD
- ❑ The after effect of using the medication.

Mode of Data Collection

Study Type:	Descriptive Study
Type of data:	Quantitative Data
Technique:	Field survey using Questionnaire
Sampling Technique:	Purposive Sampling
Study Timeline:	3 Months (March 2020-June2020)
Sampling Units:	Data from Jodhpur, Pali and Bhinmal in Rajasthan
Sample Size:	100 Doctors

Data Compilation, Analysis and Interpretation



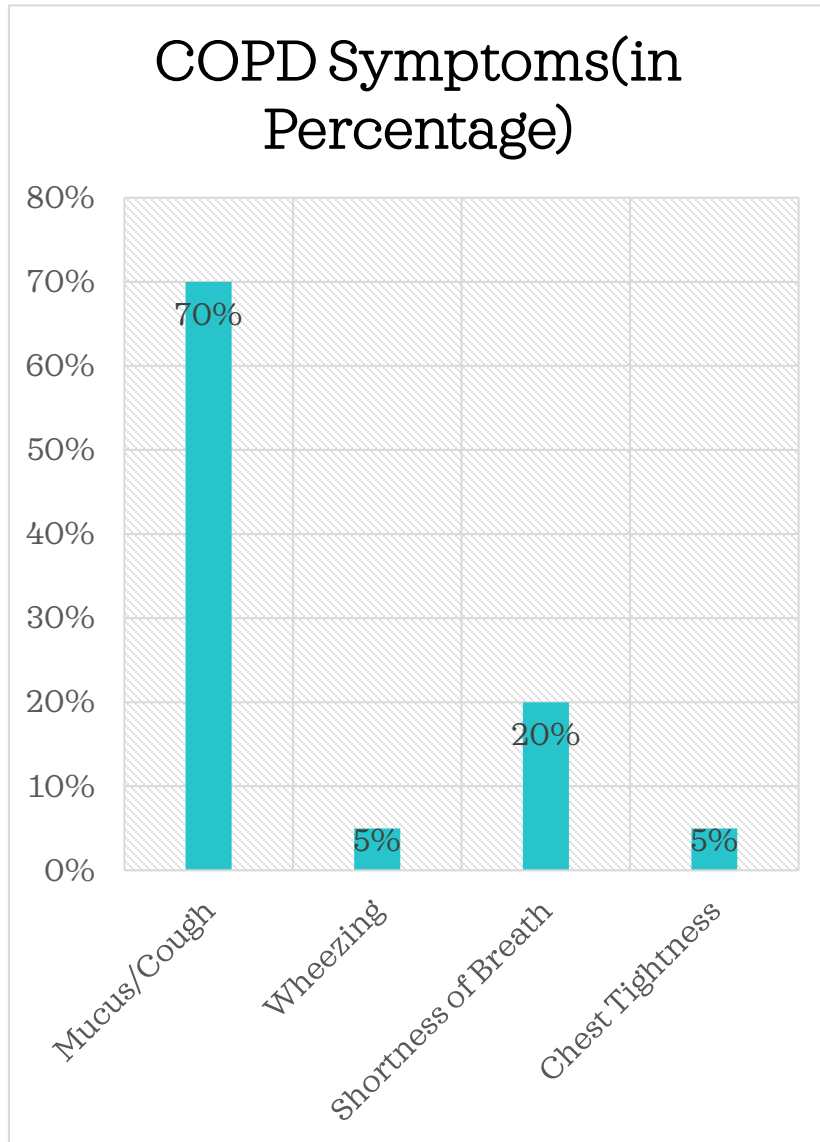
Q1. How many patients with COPD disorder visit your clinic per day?

i. 5-10

ii. 10-20

iii. More than that

Inference: From the above Pie Chart it is clear that maximum number of patients with COPD disorder that visit clinic each day ranges between 5-10

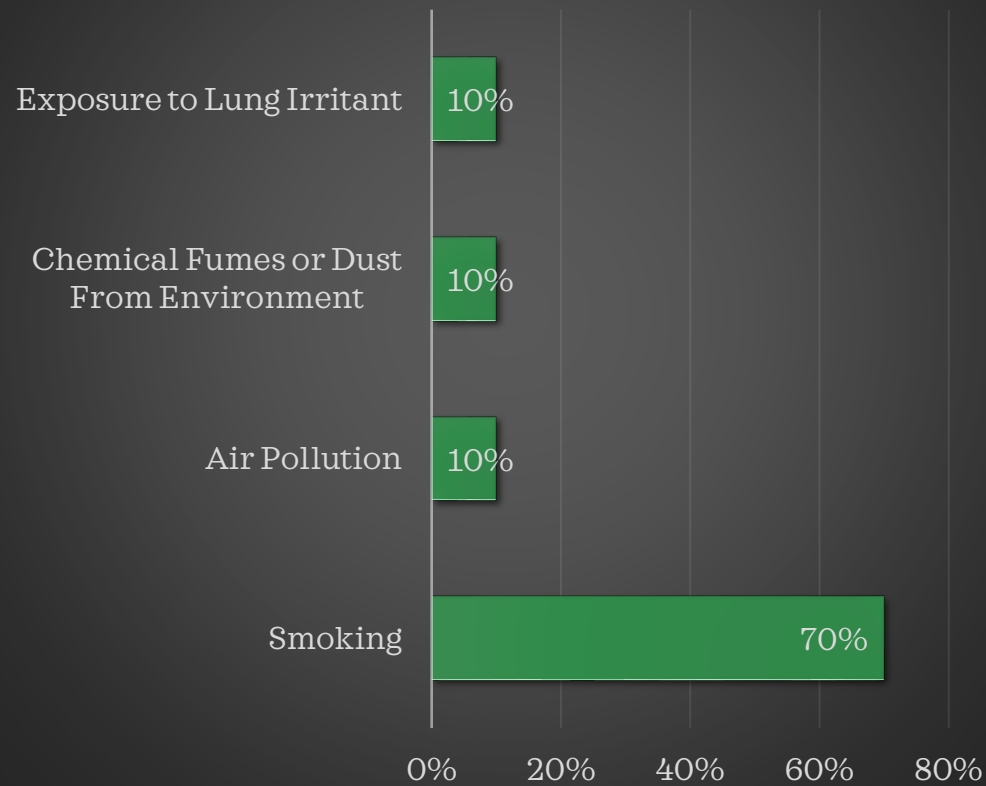


Q2. What are the major symptoms shown in any COPD patients:

- i. Mucus/Cough
- ii. Wheezing
- iii. Shortness of Breath
- iv. Chest Tightness

Inference: From the above bar graph it can be inferred that Mucus/Cough is the major symptom for COPD and almost around 70% of the patient have that whereas shortness of breath and wheezing, chest tightness ranges around 20% and 5% respectively.

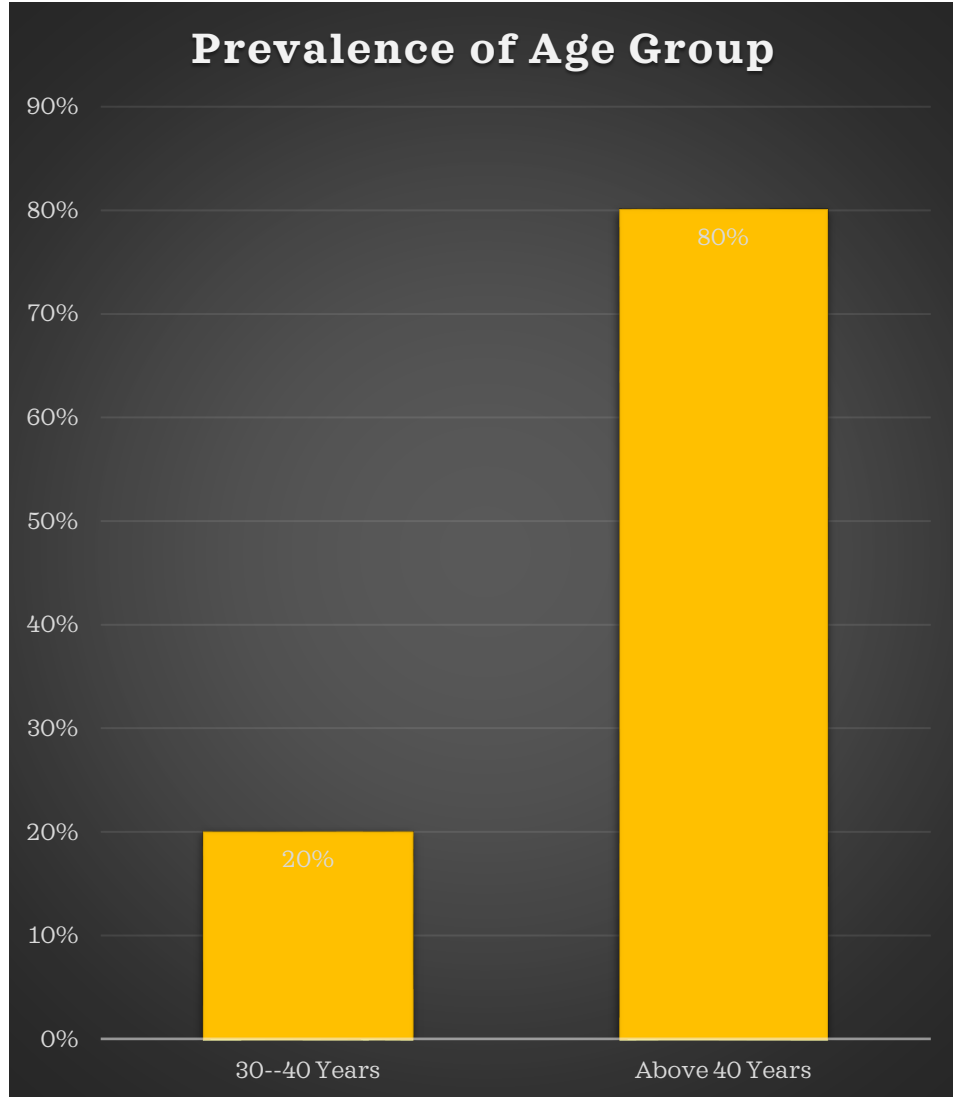
Causes of COPD(in Percentage)



Q3. What are the primary causes for COPD disorders in patients:

- i. Smoking
- ii. Air Pollution
- iii. Chemical Fumes or dust from environment
- iv. Exposure to other Lung Irritant

Inference: Out of all the causes listed out we can interpret from this bar graph that smoking is the major cause of COPD i.e., almost around 70%. The other causes like air pollution, chemical fumes from environment and exposure to other lung irritant are found to contribute only 10% each.

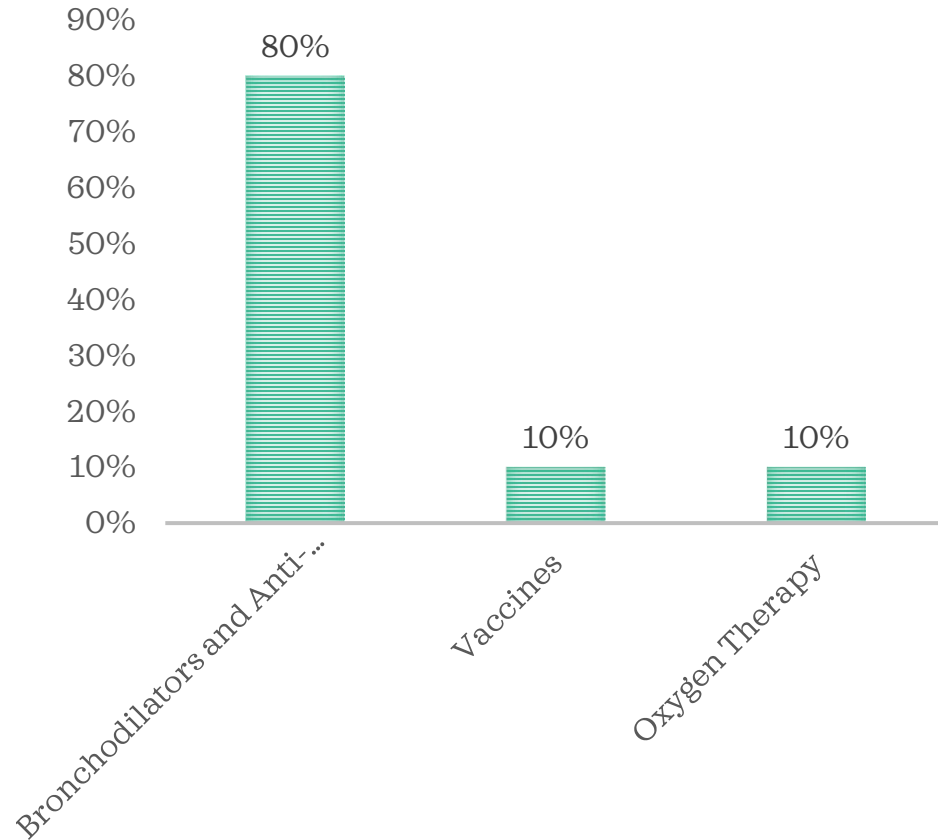


Q4. Which age group patients show up more with COPD disorders?

- i. 30-40 years
- ii. Above 40 years

Inference: From the above bar grand it is evident that maximum prevalence of COPD is among the age of 40 years and above. While only 20% marks the age-group of 30-40 years.

TREATMENT OPTIONS(IN PERCENTAGE)

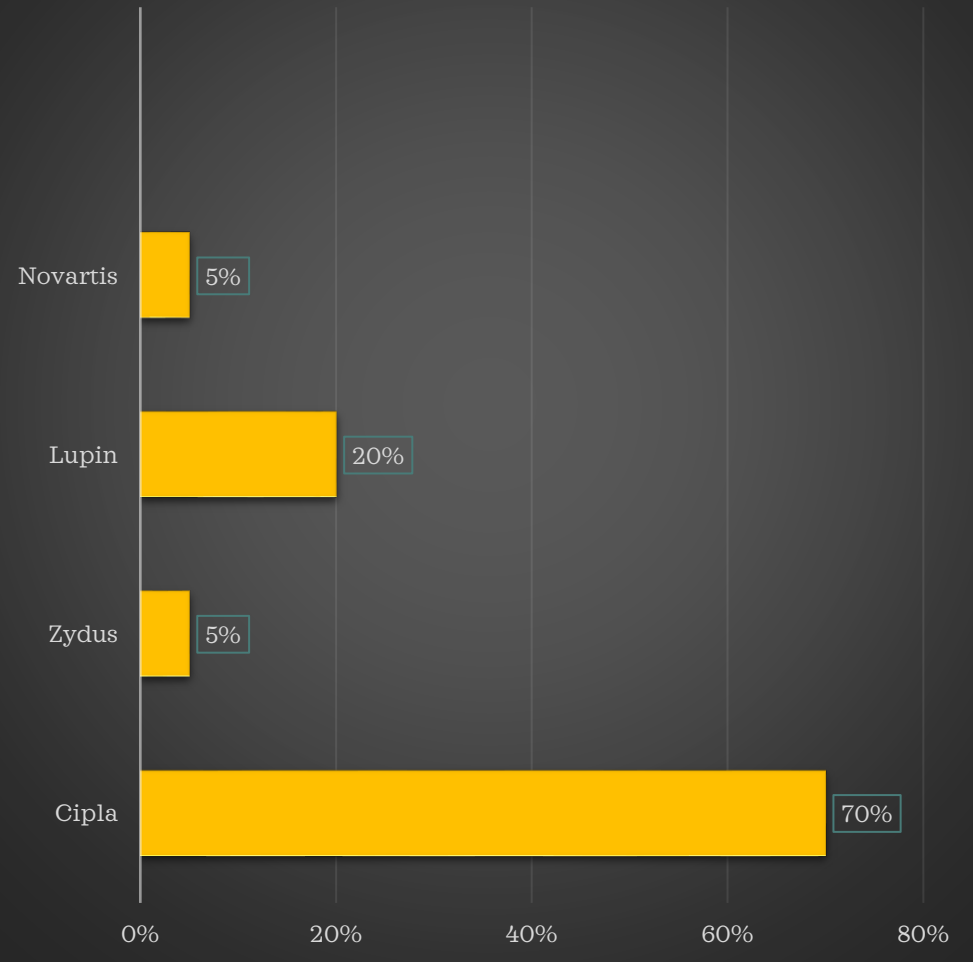


Q5. What are the various treatment options for COPD ailment?

- i. Medicines such as Bronchodilators & Anti-inflammatory
- ii. Vaccines
- iii. Oxygen Therapy

Inference: The above bar graph shows that Bronchodilators and Anti-Inflammatory medicines are the most prescribed one's by doctors then comes vaccines and oxygen therapy which only marks 10%.

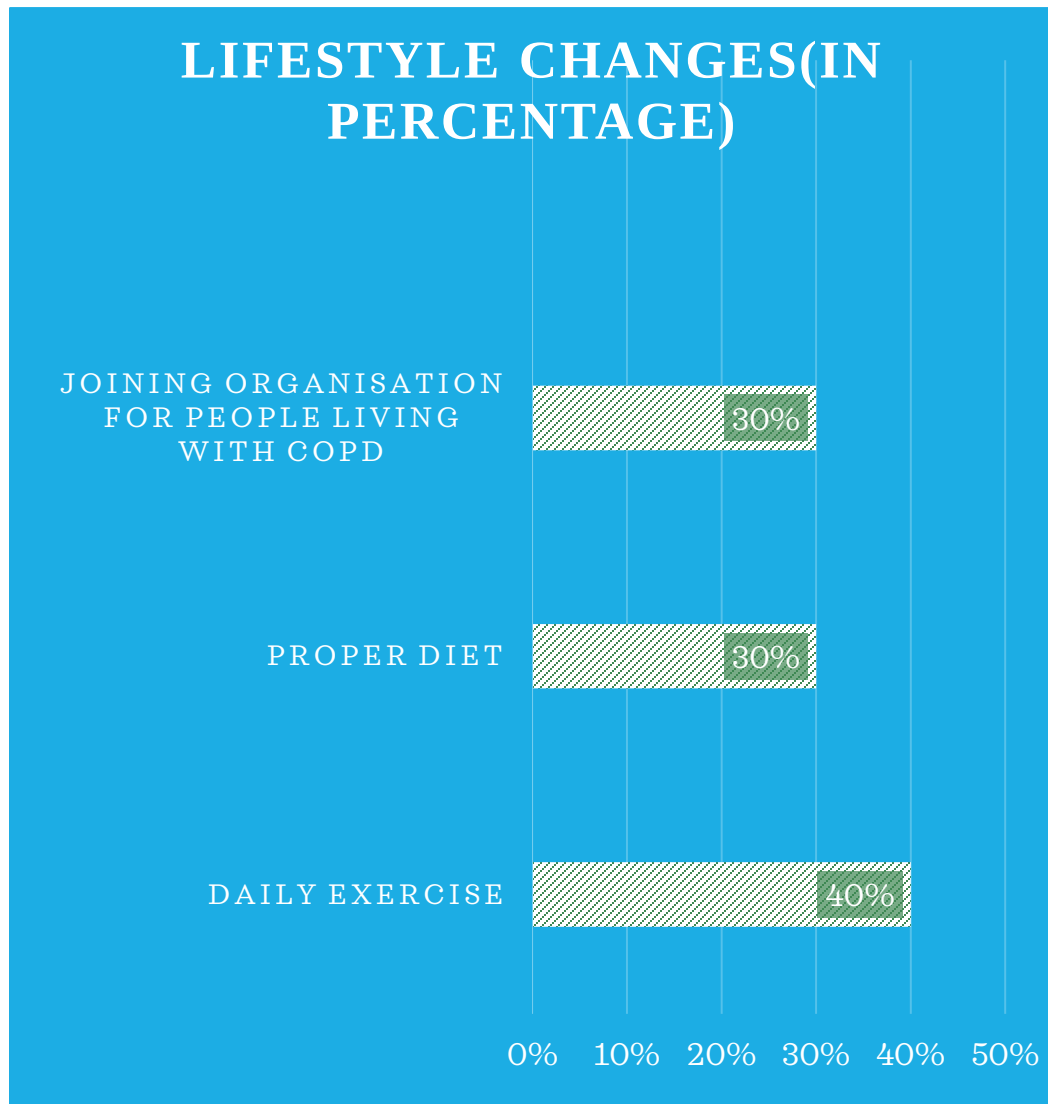
Prevalence of Medicine by each company



Q6. Which is the most prescribed Anti-COPD medicines among the following:

- Duova, Triohale and Glycohale-F by Cipla
- Tiomist, Tioform by Zydus
- Tiomate HFA, Loftair, Trimium by Lupin
- Sequadra, by Novartis

Inference: The above bar graph shows that Duova, Triohale and Glycohale-F by Cipla are those among the maximum prescribed medicines for COPD ailment(70%). Next in the row we find Tiomate HFA, Loftair, Trimium by Lupin(20%). For Tiomist, Tioform by Zydus and Sequadra, by Novartis the percentage was found to be only 5% each.

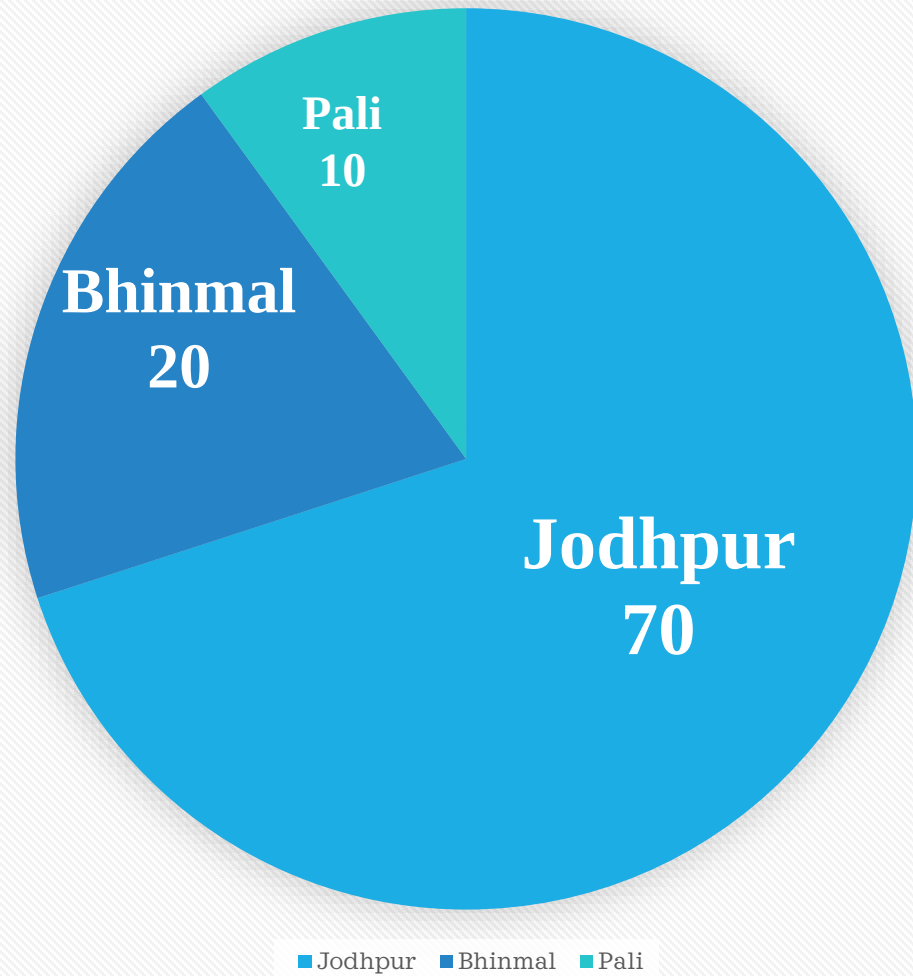


Q7. Apart from medication what all lifestyle changes can help in COPD management?

- i. Daily Exercise
- ii. A diet of nutritious food
- iii. Joining organisation and resources for people living with COPD

Inference: The above graph shows that apart from medications, daily exercise (around 40%) helps in curing COPD. Then moving on to proper diet and joining any organisation living with COPD patients marks to 30% each.

Number of Doctors



Q8. Number of Doctors in each District:

Inference: It is very clear from the graph that the number doctor surveyed in Jodhpur was maximum i.e., 70, then in Bhinmal i.e., 20 and then in Pali i.e., 10 doctors.

Conclusion

- ❑ The survey was based on a qualitative analysis where primary data from 100 doctors were collected from different districts of Rajasthan i.e., Jodhpur, Bhinmal and Pali. As per the topic of the survey the prevalence of various Anti-COPD medicines was found out and the reports say that the Anti-COPD medicines of CIPLA is the maximum prescribed followed by LUPIN and then ZYDUS and NOVARTIS in the above mentioned places.
- ❑ The maximum shown symptoms were also analysed and reported in the form of graph.
- ❑ From the above survey one thing becomes very prominent that maximum of the age group of patient suffering from COPD is 40 years and above. So it can be claimed that the most prone age group is this one itself.

References

- <https://www.who.int/respiratory/copd/causes/en/>
- <https://ascpt.onlinelibrary.wiley.com/doi/full/10.1002/cpt.1540>
- <https://www.thoracic.org/patients/patient-resources/resources/copd-intro.pdf>
- <https://www.who.int/respiratory/copd/diagnosis/en/#:~:text=A%20chronic%20obstructive%20pulmonary%20disease,and%20out%20of%20the%20lungs.>
- Natural Therapies for Emphysema and COPD <https://err.ersjournals.com/content/18/112/133>
- Positive Options for Living with COPD: Self-Help and Treatment for Chronic Obstructive Pulmonary Disease Teri Allen
- COPD Solution: A Proven 10-Week Program for Living and Breathing Better with Chronic Lung Disease Dawn Lesley Fielding.
- COPD: The Eat to Breathe Plan to Feeling Better Teri L. Pizza

A black and white photograph of a spiral-bound notebook. The notebook is open, showing a blank page with the words "Thank you" written in a cursive script. A black pen with a silver tip and clip is resting on the bottom left of the page. The notebook is placed on a dark, textured surface.

Thank you