



Sri Lakshmi Narayana Institute of Medical Sciences

From

Date: 02.11.2018

Dr. Vijay Kumar
Assistant Professor and Head,
Department of TB & Chest,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

To

The Dean,
Sri Lakshmi Narayana Institute of Medical College
Bharath Institute of Higher Education and Research,
Chennai.

**Sub: Permission to conduct value-added course: DIAGNOSIS AND TREATMENT OF CHRONIC
OBSTRUCTIVE PULMONARY DISEASE**

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE** for interns December 2018 to January 2019 We solicit your kind permission for the same.

Kind Regards

Dr .Vijay Kumar

FOR THE USE OF DEANS OFFICE

Names of Committee members for evaluating the course:

The Dean: **Dr. Jaya lakshmi**

The HOD: **Dr. Vijay Kumar**

The Expert: **Dr. Prakash Rao Balan**

The committee has discussed about the course and is approved.



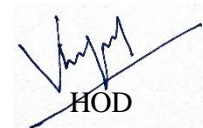
Dean

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudapakkam Post,
Villanur Commune, Puducherry-605502.



BR.
Subject Expert

Dr Prakash Rao Balan



HOD

Dr.Vijay Kumar



OFFICE OF THE DEAN

Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.

[Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME (P -II) dt. 11/07/2011]
[Affiliated to Bharath University, Chennai - TN]

Circular

08.11.2018

Sub: Organising Value-added Course: DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research** is organizing “**DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE**”. The course content is enclosed below.”

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before 30.11.2018. Applications received after the mentioned date shall not be entertained under any circumstances.

Dean

Dr. G. JAYALAKSHMI, BSC., MBBS., DTCD., M.D.,
DEAN
Sri Lakshmi Narayana Institute of Medical Sciences
Osudu, Agaram, Kudopakkam Post,
Villianur Commune, Puducherry - 605502.

Course Proposal

Course Title: **DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

Course Objective:

- 1.To diagnose a COPD patient
- 2.To improve the skill in treating a COPD patient.

Course Outcome: Improvement in the skill of management of COPD patients

Course Audience: Medical Interns of 2018 Batch

Course Coordinator: Dr. Vijay Kumar

Course Faculties with Qualification and Designation:

- 1.Dr. Vijay Kumar ,Assistant Professor**
- 2.Dr.Prakash Rao Balan, Senior Resident**

Course Curriculum/Topics with schedule (Min of 30 hours)

SINo	Date	Topic	Resource faculty	Time	Hours
1.	1/12/2018	DEFINITION AND OVERVIEW	Dr. Vijay Kumar	2-6p..m	4
2.	3/12/2018	BURDEN OF COPD	Dr.Prakash Rao Balan	2-6pm	4
3.	6/12/2018	PATHOLOGY, PATHOGENESIS AND PATHOPHYSIOLOGY	Dr. Vijay Kumar	2-6p.m	4
4.	8/12/2018	DIAGNOSIS AND INITIAL ASSESSMENT	Dr.Prakash Rao Balan	2-6p.m	4
5.	10/12/2018	Classification of severity of airflow limitation	Dr. Vijay Kumar	2-6p.m	4
6.	13/12/2018	Role of spirometry	Dr.Prakash Rao Balan	2-6p m	4
7.	15/12/2018	Differential Diagnosis of COPD	Dr. Vijay Kumar	2-6p.M	4
8.	17/12/2018	EVIDENCE SUPPORTING PREVENTION AND MAINTENANCE THERAPY	Dr.Prakash Rao Balan	2-6p.m	4
9.	20/12/2018	INTERVENTIONAL THERAPY	Dr. Vijay Kumar	4-6p.m	2
			Total		34hrs

REFERENCE BOOKS:

- 1.. Barnes PJ, Celli BR. Systemic manifestations and comorbidities of COPD. *Eur Respir J* 2009; 33(5): 1165-85.
- 2.Soriano JB, Visick GT, Muellerova H, Payvandi N, Hansell AL. Patterns of comorbidities in newly diagnosed COPD and asthma in primary care. *Chest* 2005; 128(4): 2099-107.
- 3.Mannino DM, Thorn D, Swensen A, Holguin F. Prevalence and outcomes of diabetes, hypertension and cardiovascular disease in COPD. *Eur Respir J* 2008; 32(4): 962-9.
- 4.Sin DD, Anthonisen NR, Soriano JB, Agusti AG. Mortality in COPD: Role of comorbidities. *Eur Respir J* 2006; 28(6): 1245-57.
- 5.Iversen KK, Kjaergaard J, Akkan D, et al. The prognostic importance of lung function in patients admitted with heart failure. *Eur J Heart Fail* 2010; 12(7): 685-91.

VALUE ADDED COURSE

1. Name of the programme & Code

Diagnosis and Treatment of Chronic obstructive pulmonary disease & CT03

2. Duration & Period

34 hrs & Dec2018 – Jan 2019

3. Information Brochure and Course Content of Value Added Courses

Enclosed as Annexure- I

4. List of students enrolled

Enclosed as Annexure- II

5. Assessment procedures:

Multiple choice questions

6. Certificate model

Enclosed as Annexure- IV

7. No. of times offered during the same year:

1 time Dec2018 – Jan 2019


8. Year of discontinuation: 2019


9. Summary report of each program year-wise

Value Added Course- December 2018 – January 2019					
Sl. No	Course Code	Course Name	Resource Persons	Target Students	Strength & Year
1	CT 03	Diagnosis and Treatment of chronic obstructive pulmonary disease	Dr. Vijay Kumar	CRRRI Interns	8 students DEC 2018 – Jan 2019

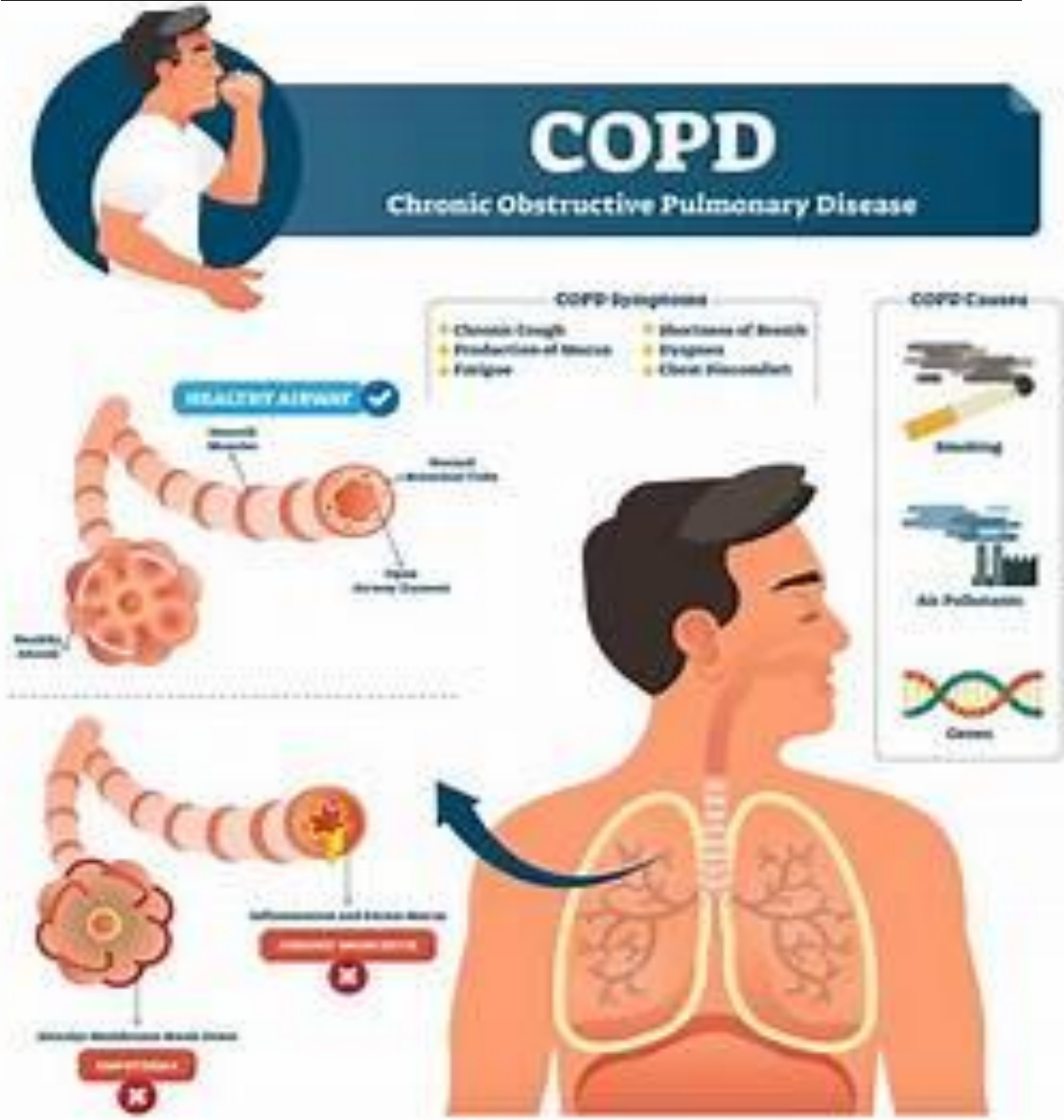
10. Course Feed Back

Enclosed as Annexure- V


RESOURCE PERSON
Dr. Prakash Rao Balan


COORDINATOR
Dr. Vijay Kumar

CHRONIC OBSTRUCTIVE PULMONARY DISEASE



PARTICIPANT HAND BOOK

COURSE DETAILS

Particulars	Description
Course Title	DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE
Course Code	CT03
Objective	1.Definition 2.Etiology and pathogenesis 3.Diagnosis 4.Differential diagnosis 5.Management of COPD
Further learning opportunities	Differentiate between asthma and COPD
Key Competencies	On successful completion of the course the students will have skill in handling and manage patients with COPD.
Target Student	CRRI Interns
Duration	32hrs
Theory Session	30 hrs + (2 hours assessment)
Assessment Procedure	Multiple choice questions

1. DEFINITION:

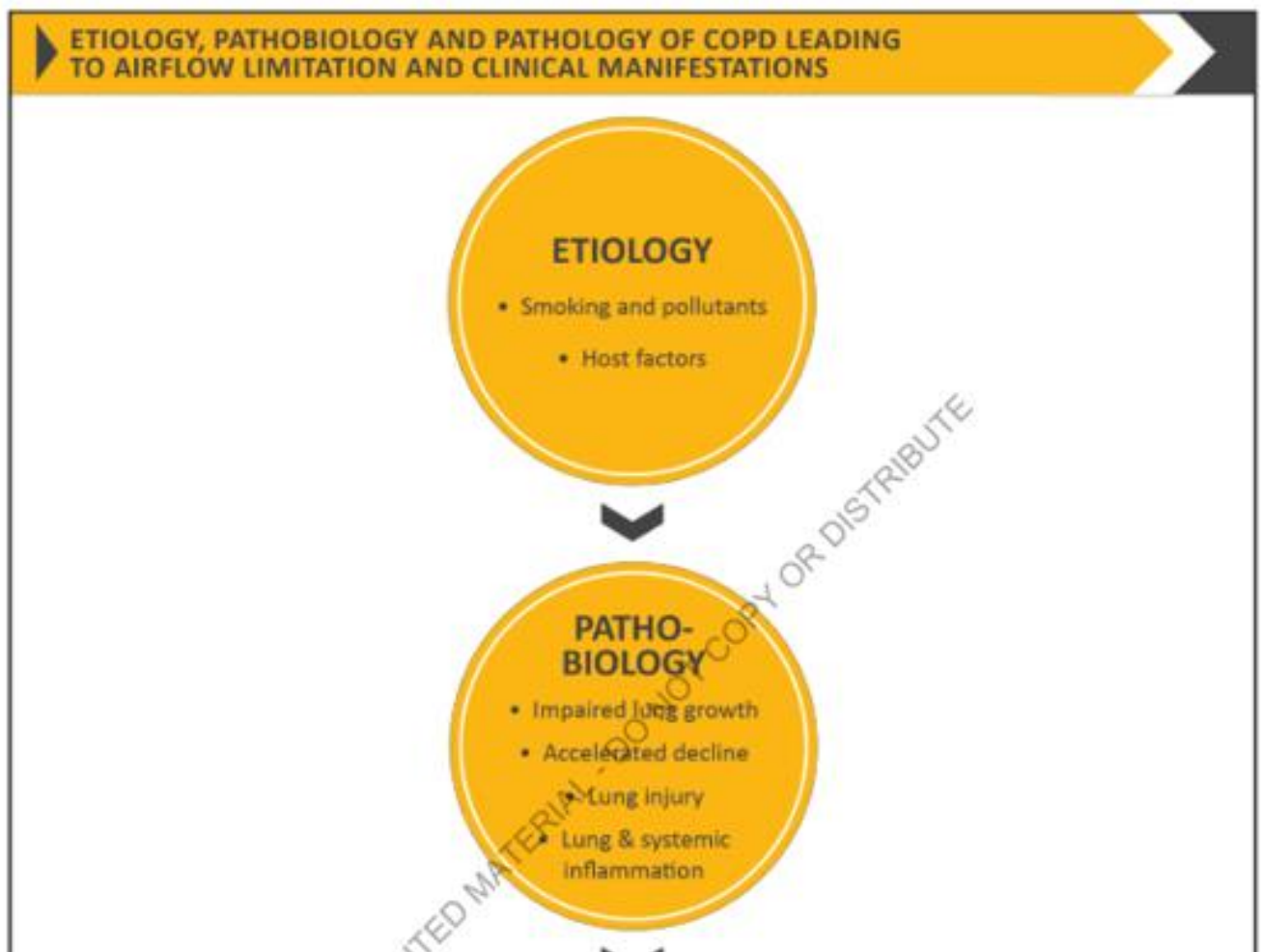
Chronic Obstructive Pulmonary Disease (COPD) is a common, preventable and treatable disease that is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases.

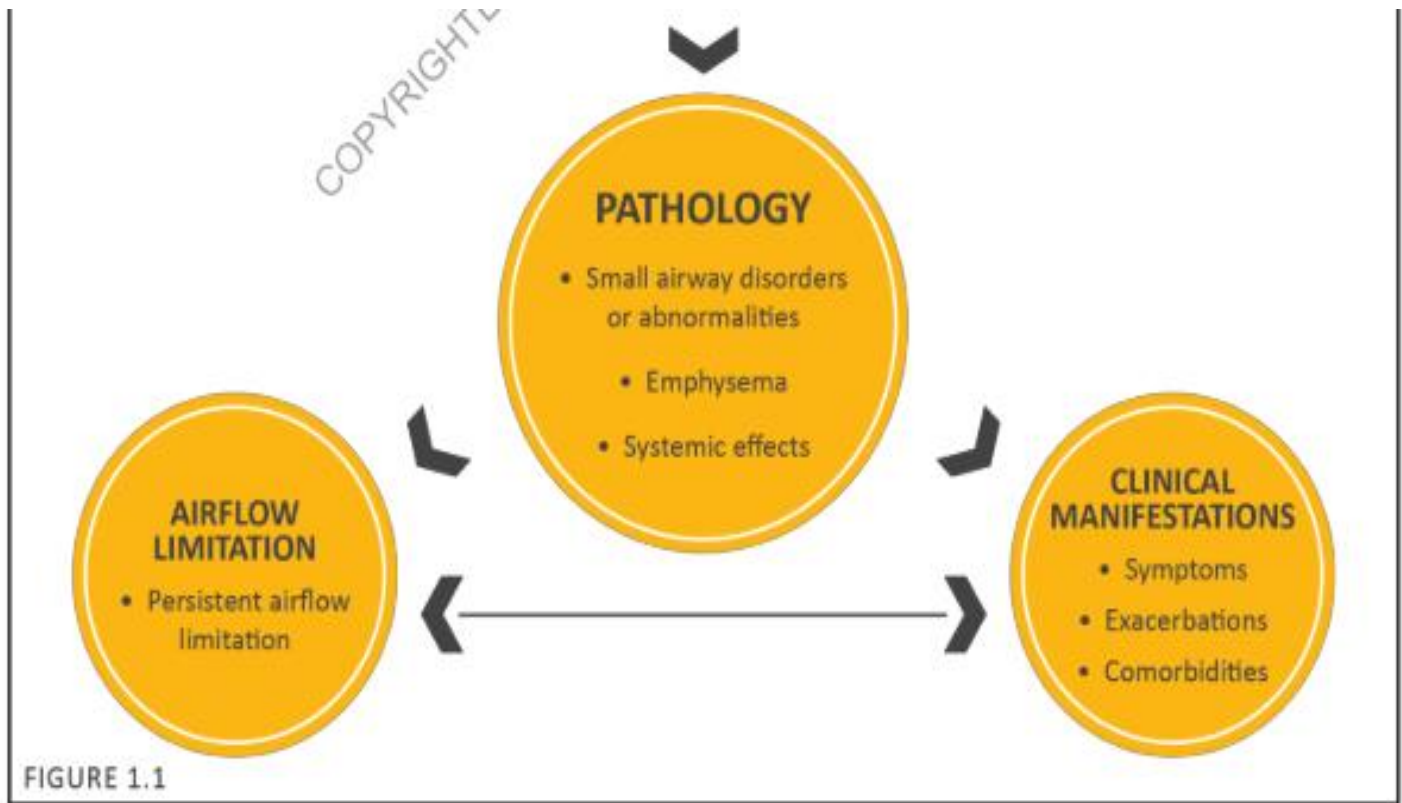
- The most common respiratory symptoms include dyspnea, cough and/or sputum production. These symptoms may be under-reported by patients.

- The main risk factor for COPD is tobacco smoking but other environmental exposures such as biomass fuel exposure and air pollution may contribute.

Besides exposures, host factors predispose individuals to develop COPD. These include genetic abnormalities, abnormal lung development and accelerated aging.

2.ETIOLOGY AND PATHOGENESIS:





3. DIAGNOSIS AND INITIAL ASSESSMENT:

▶ KEY INDICATORS FOR CONSIDERING A DIAGNOSIS OF COPD

Consider COPD, and perform spirometry, if any of these indicators are present in an individual over age 40. These indicators are not diagnostic themselves, but the presence of multiple key indicators increases the probability of a diagnosis of COPD. Spirometry is required to establish a diagnosis of COPD.

Dyspnea that is:	Progressive over time. Characteristically worse with exercise. Persistent.
Chronic Cough:	May be intermittent and may be unproductive. Recurrent wheeze.
Chronic Sputum Production:	Any pattern of chronic sputum production may indicate COPD.

COPYRIGHT

Recurrent Lower Respiratory Tract Infections

History of Risk Factors: Host factors (such as genetic factors, congenital/developmental abnormalities etc.).
Tobacco smoke (including popular local preparations).
Smoke from home cooking and heating fuels.
Occupational dusts, vapors, fumes, gases and other chemicals.

Family History of COPD and/or Childhood Factors: For example, low birthweight, childhood respiratory infections etc.

▶ PATHWAYS TO THE DIAGNOSIS OF COPD

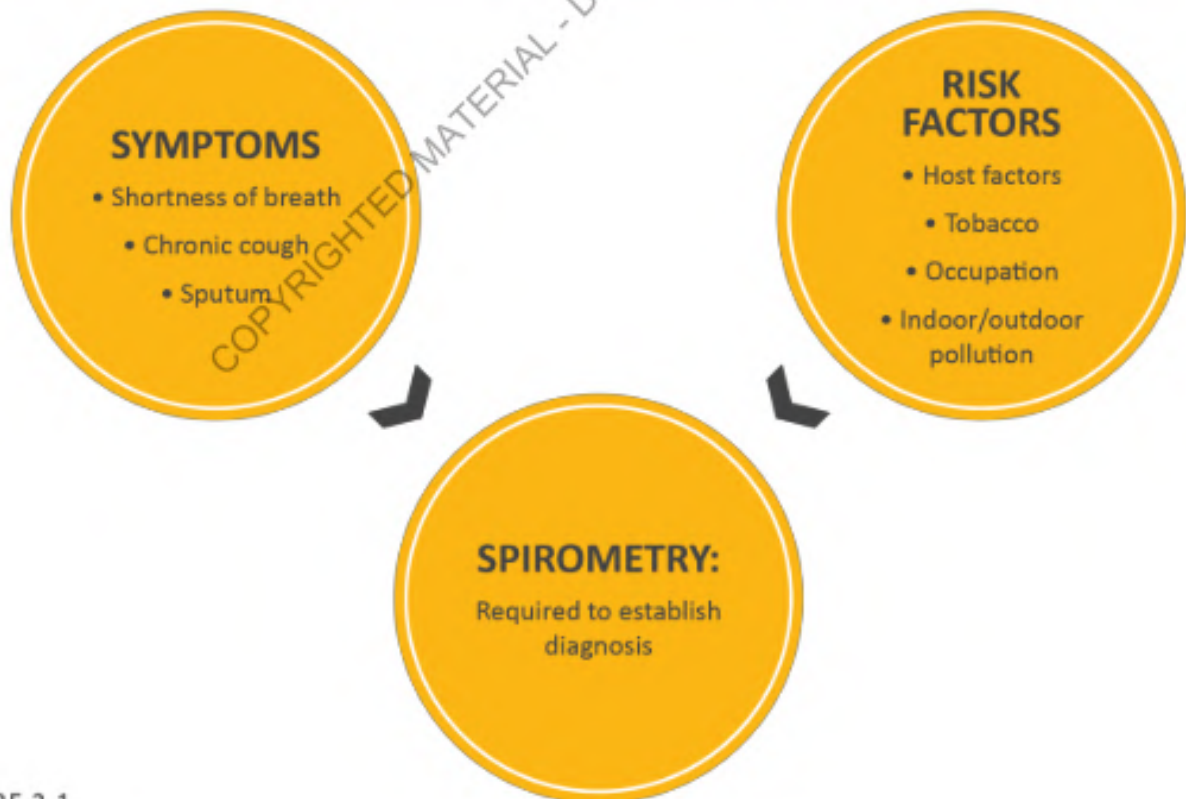
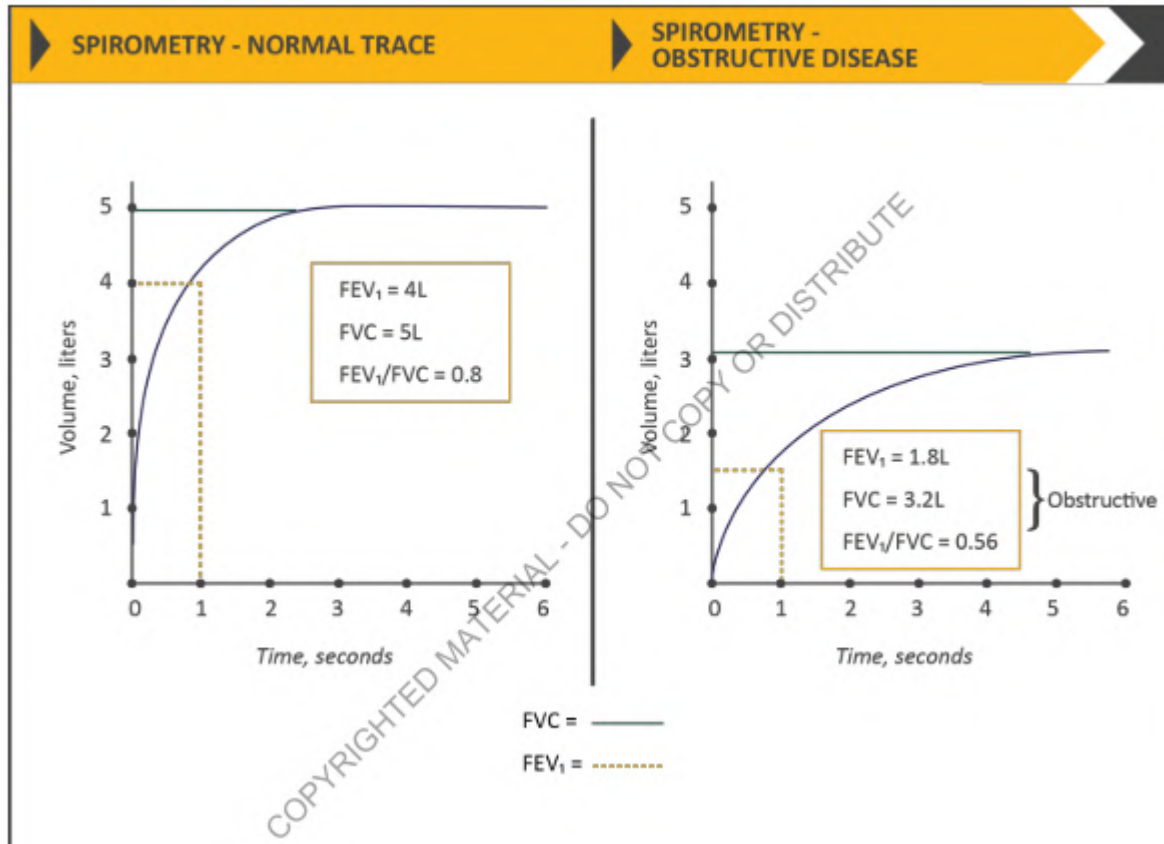


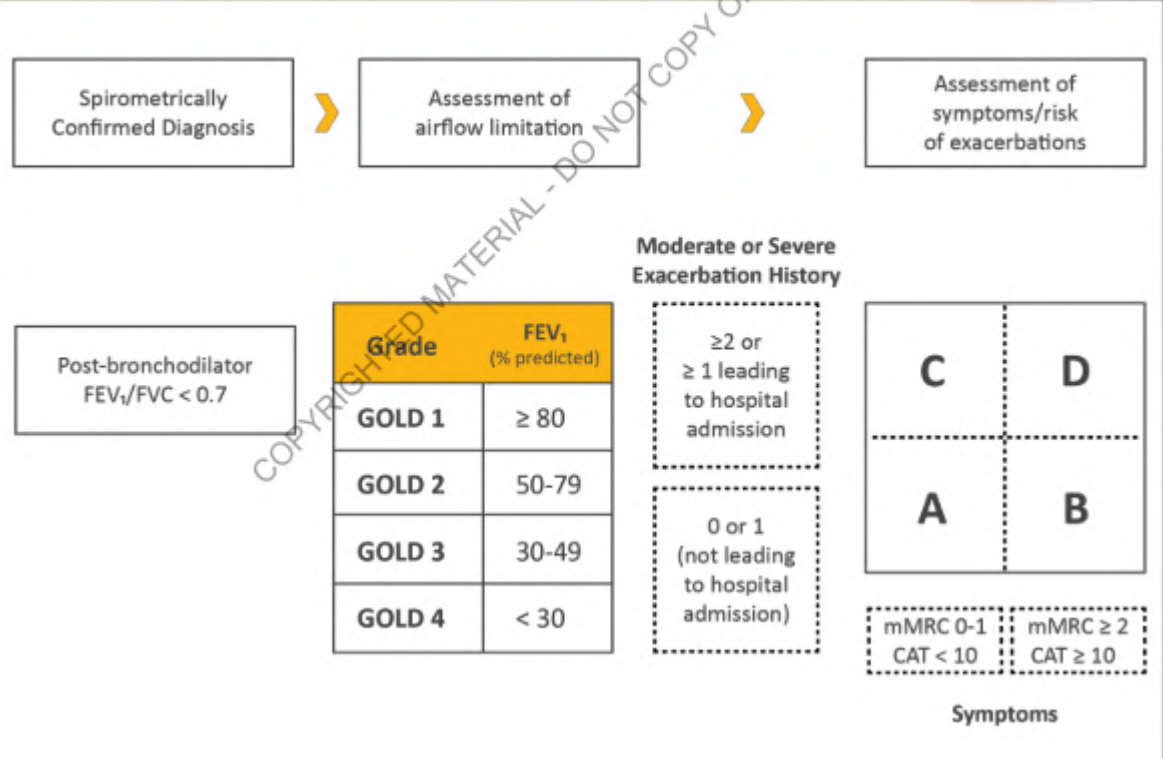
FIGURE 2.1

SPIROMETRY NORMAL AND ABNORMAL GRAPH :



DIAGNOSTIC PATHWAY IN THE DIAGNOSIS OF COPD :

THE REFINED ABCD ASSESSMENT TOOL



4. DIFFERENTIAL DIAGNOSIS OF COPD :

DIAGNOSIS	SUGGESTIVE FEATURES
COPD	Onset in mid-life. Symptoms slowly progressive. History of tobacco smoking or exposure to other types of smoke.
Asthma	Onset early in life (often childhood). Symptoms vary widely from day to day. Symptoms worse at night/early morning. Allergy, rhinitis, and/or eczema also present. Family history of asthma. Obesity coexistence.
Congestive Heart Failure	Chest X-ray shows dilated heart, pulmonary edema. Pulmonary function tests indicate volume restriction, not airflow limitation.

Bronchiectasis	Large volumes of purulent sputum. Commonly associated with bacterial infection. Chest X-ray/CT shows bronchial dilation, bronchial wall thickening.
Tuberculosis	Onset all ages. Chest X-ray shows lung infiltrate. Microbiological confirmation. High local prevalence of tuberculosis.
Obliterative Bronchiolitis	Onset at younger age, nonsmokers. May have history of rheumatoid arthritis or acute fume exposure. Seen after lung or bone marrow transplantation. CT on expiration shows hypodense areas.
Diffuse Panbronchiolitis	Predominantly seen in patients of Asian descent. Most patients are male and nonsmokers. Almost all have chronic sinusitis. Chest X-ray & HRCT show diffuse small centrilobular nodular opacities & hyperinflation.

These features tend to be characteristic of the respective diseases, but are not mandatory. For example, a person who has never smoked may develop COPD (especially in the developing world where other risk factors may be more important than cigarette smoking); asthma may develop in adult and even in elderly patients.

5.MANAGEMENT OF COPD :

Smoking cessation is key. Pharmacotherapy and nicotine replacement reliably increase long-term smoking abstinence rates.

Legislative smoking bans and counseling, delivered by healthcare professionals, improve quit rates.

Each pharmacological treatment regimen should be individualized and guided by the severity of symptoms, risk of exacerbations, side-effects, comorbidities, drug availability and cost, and the patient's response, preference and ability to use various drug delivery devices.

- Inhaler technique needs to be assessed regularly.
- Influenza vaccination decreases the incidence of lower respiratory tract infections.
- Pneumococcal vaccination decreases lower respiratory tract infections.

- Pulmonary rehabilitation improves symptoms, quality of life, and physical and emotional participation in everyday activities.

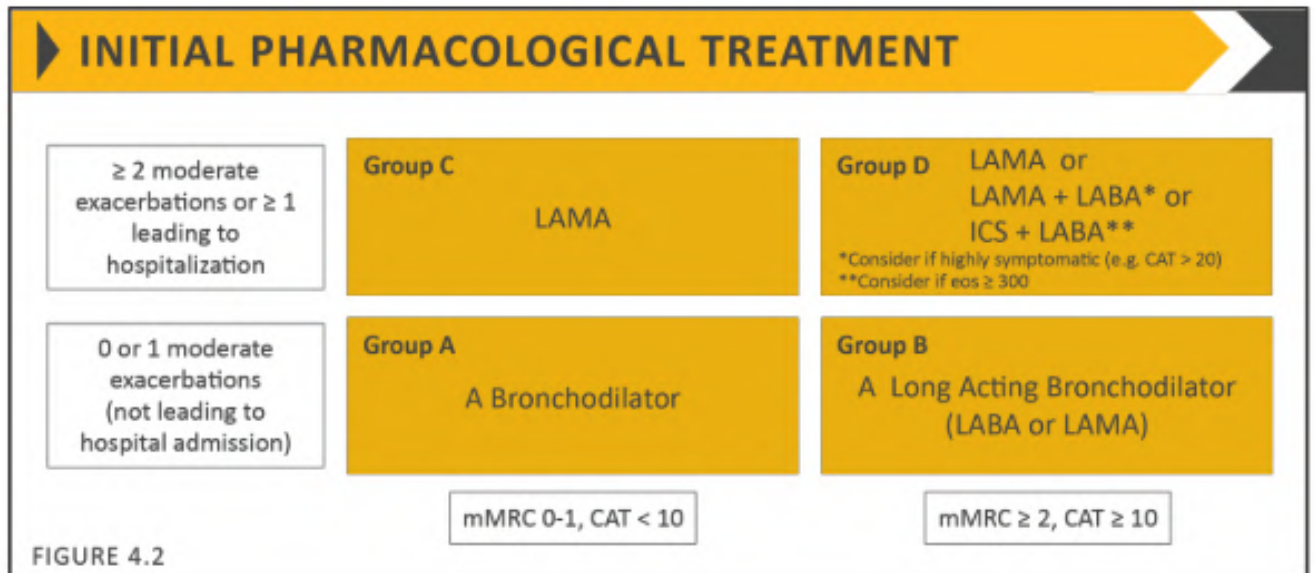
In patients with severe resting chronic hypoxemia, long-term oxygen therapy improves survival.

- In patients with stable COPD and resting or exercise-induced moderate desaturation, long-term oxygen treatment should not be prescribed routinely. However, individual patient factors must be considered when evaluating the patient’s need for supplemental oxygen.
- In patients with severe chronic hypercapnia and a history of hospitalization for acute respiratory failure, long-term non-invasive ventilation may decrease mortality and prevent re-hospitalization

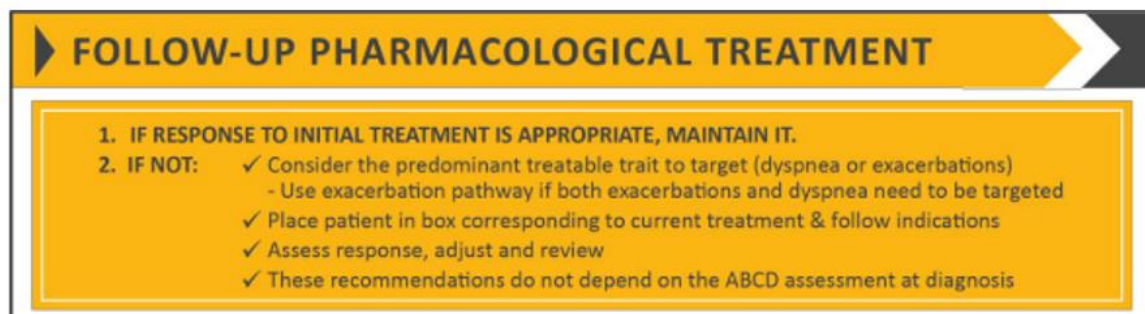
▶ NON-PHARMACOLOGIC MANAGEMENT OF COPD*			
PATIENT GROUP	ESSENTIAL	RECOMMENDED	DEPENDING ON LOCAL GUIDELINES
A	Smoking Cessation (can include pharmacologic treatment)	Physical Activity	Flu Vaccination Pneumococcal Vaccination
B, C and D	Smoking Cessation (can include pharmacologic treatment) Pulmonary Rehabilitation	Physical Activity	Flu Vaccination Pneumococcal Vaccination

*Can include pharmacologic treatment.

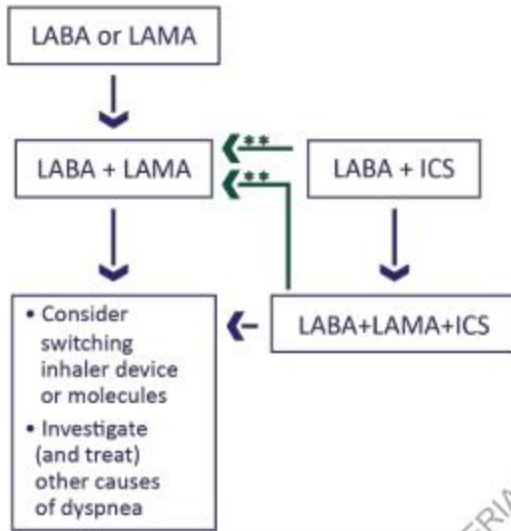
PHARAMACOLOGICAL MANAGEMENT:



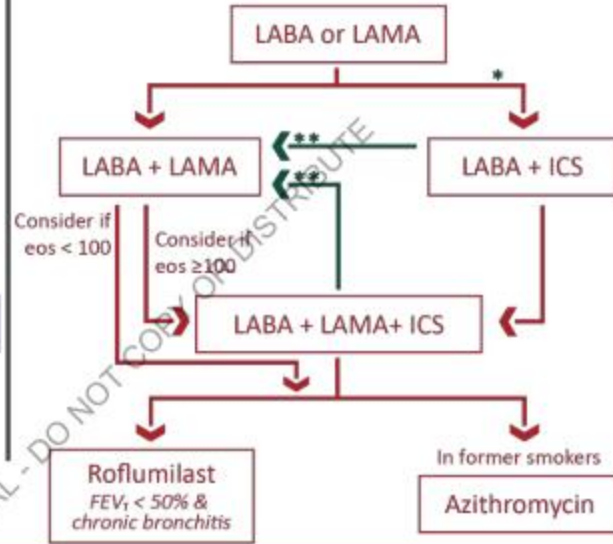
FOLLOW UP PHARAMACOLOGICAL TREATMENT:



• DYSPNEA •



• EXACERBATIONS •



eos = blood eosinophil count (cells/ μ L)

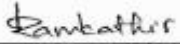
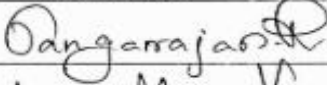
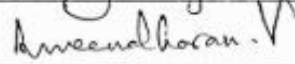
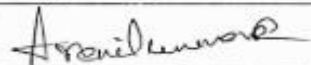
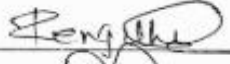

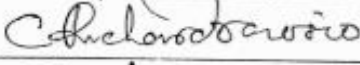
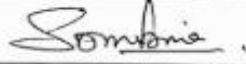
* Consider if eos \geq 300 or eos \geq 100 AND \geq 2 moderate exacerbations / 1 hospitalization

** Consider de-escalation of ICS or switch if pneumonia, inappropriate original indication or lack of response to ICS

VALUE ADDED COURSE

DIAGNOSIS AND TREATMENT OF COPD & CT03

4. List of Students Enrolled DEC 2018 – JAN 2019

1 st Year MBBS Student		SIGNATURE
Name of the Student	Roll No	
RAMKATHIR	U14MB297	
RANGARAJAN. R	U14MB298	
RAVEENDHAREN.V	U14MB299	
RENIL KUMAR. A	U14MB300	
RENIITH. J	U14MB301	
RESHMA. R.L.	U14MB302	
RICHARD ROZARIO. C	U14MB303	
RUBINA.S	U14MB304	


RESOURCE PERSON


COORDINATOR



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

Annexure - III

DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY
DISEASE
MULTIPLE CHOICE QUESTIONS.



Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry

CANDIDATE AND ASSESSOR INFORMATION

Course code: CT 03

Candidate Name	RANGARAJAN	Assessor Name	DR. VIJAY KUMAR.
Date of Assessment	20.12.2018	Assessor Position	ASSISTANT PROFESSOR AND HOD

QUESTIONS:

1. Drug treatment for asthma and COPD aim to do all of the following except:

- Cure asthma/COPD
- Relieve/prevent bronchoconstriction
- Inhibit airway inflammation
- Prevent airway remodeling
- Manage asthma/COPD

2. Which of the following statements is not true with regard to COPD?



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AND RESEARCH

A. COPD is an internationally recognized term used to indicate chronic bronchitis and emphysema.

B. Key feature of COPD is poor reversibility of airflow limitation even after giving bronchodilators.

~~C. COPD is more common in young age.~~

D. COPD originates in the peripheral airways and in the air spaces of the lungs

3. Which of these is not a risk factor for COPD?

A. Homozygous serum alpha-1 antitrypsin deficiency.

B. Thiazide diuretics

~~C. Potassium sparing diuretics~~

D. Osmotic diuretics

4. Diagnosis of COPD can be firmly made by:

~~A. Spirometry~~

B. X-ray chest

C. Auscultation

D. Blood Test

5. Which of these factors if present suggest the diagnosis COPD?

A. Long history of heavy smoking.

B. Chronic cough with large amount of sputum production.



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AND RESEARCH

C. Breathlessness mainly on exertion, which is gradually increasing.

~~D. All of the above~~

6. The two diseases grouped together that make up COPD are:

A. Asthma

~~B. Chronic Bronchitis~~

~~C. Emphysema~~

D. Bronchiolitis

E. Cystic Fibrosis

7. The doctor can tell the patient needs further education about hypoxemia when the patient states:

~~A. I have too much oxygen in my system~~

B. I will get fatigued with hard exercise.

C. I have too much CO₂ in my system.

D. I should use pursed lip breathing to empty my alveoli.

8. Bifurcation in adults is usually at T6. Where is it normally bifurcated on children?

A. T6

B. T5

~~C. T4~~

D. T3



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AND RESEARCH

E. T2

-

9. What is the most common airway disease found in children?

A. Asthma

B. Bronchiolitis

C. Cystic Fibrosis

-

10. What s/s will most likely be seen by an Asthma pt?

A. Productive cough.

B. Mucus plugs in bronchiols.

C. Wheezing.

D. Loss of cilia.

-

11.. 1% of emphysema pts have centrilobular type of emphysema.

A. True

B. False



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

Annexure - III

DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY
DISEASE
MULTIPLE CHOICE QUESTIONS



Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry

CANDIDATE AND ASSESSOR INFORMATION

Course code: CT 03

Candidate Name	RESHMA . R	Assessor Name	DR. VIJAY KUMAR
Date of Assessment	20.12.2018	Assessor Position	ASSISTANT PROFESSOR +1/HOD

QUESTIONS:

1. Drug treatment for asthma and COPD aim to do all of the following except:

Cure asthma/COPD

- Relieve/prevent bronchoconstriction
- Inhibit airway inflammation
- Prevent airway remodeling
- Manage asthma/COPD

2. Which of the following statements is not true with regard to COPD?



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

A. COPD is an internationally recognized term used to indicate chronic bronchitis and emphysema.

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A. Long history of heavy smoking.

B. Chronic cough with large amount of sputum production.



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

C. Breathlessness mainly on exertion, which is gradually increasing.

D. All of the above

•

6. The two diseases grouped together that make up COPD are:

A. Asthma

B. Chronic Bronchitis

C. Emphysema

D. Bronchiolitis

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7. The doctor can tell the patient needs further education about hypoxemia when the patient states:

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-
8. Bifurcation in adults is usually at T6. Where is it normally bifurcated on children?

A. T6

B. T5

C. T4

D. T3



SRI LAKSHMI NARAYANA INSTITUTE OF HIGHER EDUCATION
AND RESEARCH

E. T2

-
9. What is the most common airway disease found in children?

A. Asthma

B. Bronchiolitis

C. Cystic Fibrosis

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10. What s/s will most likely be seen by an Asthma pt?

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B. Mucus plugs in brochiols.

C. Wheezing.

D. Loss of cilia.

-
11.. 1% of emphysema pts have centrilobular type of emphysema.

A. True

B. False



Sri Lakshmi Narayana Institute of Medical Sciences

This is to certify that ___Reshma.R(U14MB302)___ has actively

participated in the Value Added Course on DIAGNOSIS AND TREATMENT OF

CHRONIC OBSTRUCTIVE PULMONARY DISEASE held during December 2018 -

January 2019 Organized by Sri Lakshmi Narayana Institute of Medical Sciences,

Pondicherry- 605 502, India.

Dr. Prakash Rao Balan

Dr. Prakash Rao Balan
RESOURCE PERSON

Dr. Vijay Kumar


COORDINATOR



Sri Lakshmi Narayana Institute of Medical Sciences

This is to certify that ___Rangarajan.R(U14MB298)___ has actively participated in the Value Added Course on DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE held during December 2018 - January 2019 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.


Dr. Prakash Rao Balan
RESOURCE PERSON


Dr. Vijay Kumar
COORDINATOR

Student Feedback Form

Course Name: DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Subject Code: CT 03

Name of Student: RANCHARAJAN R Roll No.: U14HB298

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

SL NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				/	
2	Course contents met with your expectations				/	
3	Lecturer sequence was well planned				/	
4	Lectures were clear and easy to understand					/
5	Teaching aids were effective					/
6	Instructors encourage interaction and were helpful					/
7	The level of the course				/	
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

EXCELLENT

Date: 20.12.2018


Signature

Student Feedback Form

Course Name: DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Subject Code: CT 03

Name of Student: RESHMA R Roll No.: U14MB302

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

Sl. NO	Particulars	1	2	3	4	5
1	Objective of the course is clear				✓	
2	Course contents met with your expectations					✓
3	Lecturer sequence was well planned					✓
4	Lectures were clear and easy to understand				✓	
5	Teaching aids were effective			✓		
6	Instructors encourage interaction and were helpful			✓		
7	The level of the course				✓	
8	Overall rating of the course	1	2	3	4	5

* Rating: 5 - Outstanding; 4 - Excellent; 3 - Good; 2 - Satisfactory; 1 - Not-Satisfactory

Suggestions if any:

Good

Date: 20.12.2018


Signature

COURSE COMPLETION

Date: 10.01.2018

From

Dr. Vijay Kumar
Assistant Professor and Head,
Department of Respiratory medicine,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

Through Proper Channel

To

The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research,
Chennai.

**Sub: Completion of value-added course: DIAGNOSIS AND TREATMENT OF CHRONIC
OBSTRUCTIVE PULMONARY DISEASE & CT03**

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: : **DIAGNOSIS AND TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE** from December 2018 to January 2019 8 interns (Batch 2018) . We solicit your kind action to send certificates for the participants, that is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,

Dr. Vijay Kumar

Encl: Certificates

Photographs

