Sri Lakshmi Narayana Institute of Medical Sciences

Date: 06.9.2018

From

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 Bronchial Asthma

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: **Diagnosis and Treatment of Bronchial Asthma** for interns October to November 2018 . 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

Subject Expert

HOD

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

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]
[Affliated to Bharath University, Chennai - TN]

Circular

20.09.2018

Sub: Organising Value-added Course: DIAGNOSIS AND MANAGEMENT OF BRONCHIAL ASTHMA.

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 MANAGEMENT OF BRONCHIAL ASTHMA". 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 30.9.2018. 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, Kudapakkam Post,
Villianur Commune, Puducherry - 605502.

Course Proposal

Course Title: **DIAGNOSIS AND MANAGEMENT OF BRONCHIAL ASTHMA**

Course Objective:

1. To know how to properly Treat BRONCHIAL ASTHMA patients.

Course Outcome: Better management of Bronchial Asthma 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)

SlNo	Date	Topic	Resource faculty	Time	Hours
1.	1/10/2018	Introduction epidemiology ,etiology of bronchial asthma	Dr.vijay kumar	2-6p..m	4
2.	4/10/2018	Pathophysiology of bronchial asthma	Dr.prakash rao balan	2-6pm	4
3.	6/10/2018	Pathology of bronchial asthma	Dr.vijay kumar	2-6p.m	4
4.	8/10/2018	Clinical presentation of BA	Dr.prakash rao balan	2-6p.m	4
5.	11/10/2018	Diagnosis of bronchial asthma	Dr.vijay kumar	2-6p.m	4
6.	13/10/2018	Prognosis of BA	Dr.prakash rao balan	2-6p m	4
7.	15/10/2018	Complications of BA	Dr.vijay kumar	2-6P.M	4
8.	18/10/2018	Management of BA	Dr.prakash rao balan	2-6p.m	4
9.	20/10/2018	Pharmacologic management of BA	Dr.vijay kumar	4-6p.m	2
		Total			34hrs

REFERENCE BOOKS:

1.National Heart Lung and Blood Institute N. Global initiative for asthma. Global strategy for asthma management and prevention. NHBLI/WHO workshop. 1995:NIH Publication no. 95-3659. 2.

2.Schunemann HJ, Jaeschke R, Cook DJ, Bria WF, El-Solh AA, Ernst A, Fahy BF, et al. An official ATS statement: grading the quality of evidence and strength of recommendations in ATS guidelines and recommendations. Am J Respir Crit Care Med 2006;174:605-14. 3.

3.Asher I, Bissell K, Chiang CY, El Sony A, Ellwood P, Garcia-Marcos L, Marks GB, et al. Calling time on asthma deaths in tropical regions-how much longer must people wait for essential medicines? Lancet Respir Med 2019;7:13-5.

VALUE ADDED COURSE

1. Name of the programme & Code

DIAGNOSIS AND MANAGEMENT OF BRONCHIAL ASTHMA & CT 02

2. Duration & Period

34 hrs & October -November 2018

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- *Enclosed as Annexure- III*

6. Certificate model

Enclosed as Annexure- IV

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

October -November 2018

8. Year of discontinuation: 2019

9. Summary report of each program year-wise

Value Added Course- October – November 2018					
Sl. No	**Course Code**	**Course Name**	**Resource Persons**	**Target Students**	**Strength & Year**
1	CT 02	**Diagnosis and management of Bronchial asthma**	Dr. Vijay Kumar	CRRI Interns	8 students OCT -NOV 2018

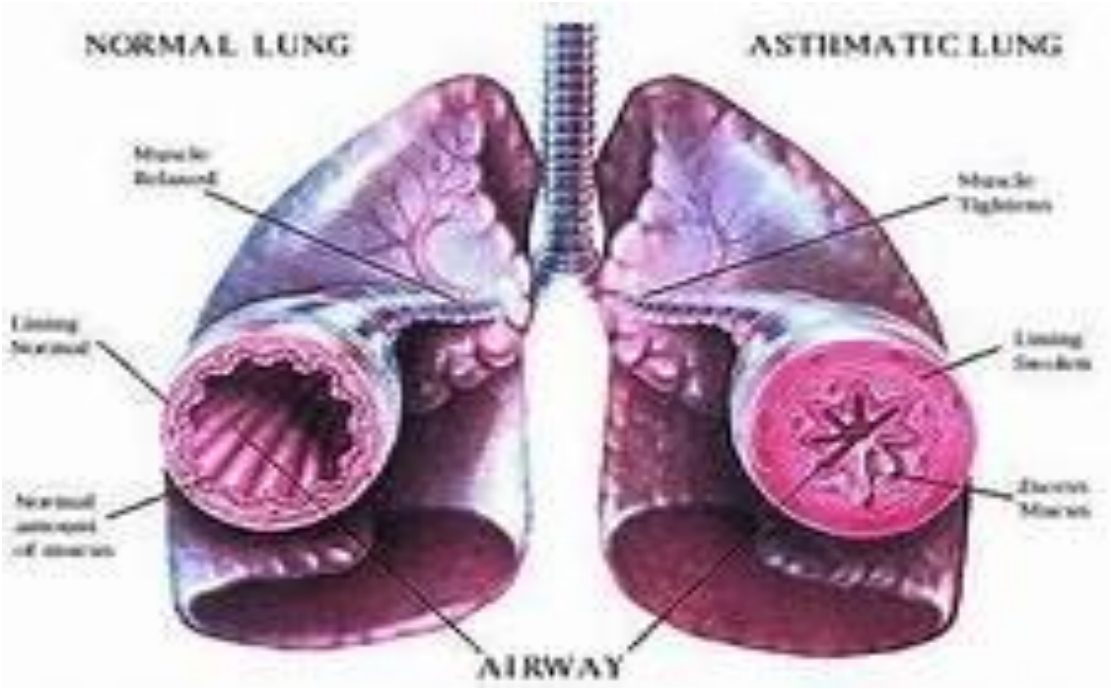
10. Course Feed Back

Enclosed as Annexure- V

RESOURCE PERSON **COORDINATOR**

Dr. Prakash Rao Balan **Dr. Vijay Kumar**

BRONCHIAL ASTHMA



PARTICIPANT HAND BOOK

COURSE DETAILS

Particulars	Description
Course Title	Diagnosis and Management of Bronchial asthma
Course Code	02
Objective	1.DEFINITION OF ASTHMA 2.PHENOTYPES OF ASTHMA 3.SYPTOMS OF ASTHMA: 4.DIAGNOSTIC FLOWDIAGRAM FOR BRONCHIAL ASTHMA 5.DIAGNOSTIC CRITERIA FOR BRONCHIAL ASTHMA: 6.SELECTING THE INITIAL PHARMACOLOGICAL TREATMENT FOR BRONCHIAL ASTHMA 7.NON PHARMACOLOGICAL INTERVENTIONS FOR ASTHMA 8.MANAGEMENT OF ASTHMA EXACERBATIONS:
Further learning opportunities	**Bronchial asthma and standard guidelines and how to differentiate from COPD**

Key Competencies	On successful completion of the course the students will have skill in handling patients with bronchial asthma
Target Student	**Interns**
Duration	32hrs +2 hrs MCQ ,October to November 2016
Theory Session	34 hrs
Assessment Procedure	Multiple choice questions

1.DEFINITION OF ASTHMA:

Asthma is a heterogeneous disease, usually characterized by chronic airway inflammation.

It is defined by the history of respiratory symptoms such as wheeze, shortness of breath, chest tightness and cough that vary over time and in intensity, together with variable expiratory airflow limitation.

Airflow limitation may later become persistent

2.PHENOTYPES OF ASTHMA:

Many clinical phenotypes of asthma have been identified.Some of the most common are:

• **Allergic asthma**: This is the most easily recognized asthma phenotype, which often commences in childhood and is associated with a past and/or family history of allergic disease such as eczema, allergic rhinitis, or food or drug allergy.

Examination of the induced sputum of these patients before treatment often reveals eosinophilic airway inflammation.

Patients with this asthma phenotype usually respond well to inhaled corticosteroid (ICS) treatment.

• **Non-allergic asthma**: Some patients have asthma that is not associated with allergy.

The cellular profile of the sputum of these patients may be neutrophilic, eosinophilic or contain only a few inflammatory cells (paucigranulocytic). Patients with non-allergic asthma often demonstrate less short-term response to ICS.

• **Adult-onset (late-onset) asthma**: Some adults, particularly women, present with asthma for the first time in adult life.

These patients tend to be non-allergic, and often require higher doses of ICS or are relatively refractory to corticosteroid treatment.

Occupational asthma (i.e. asthma due to exposures at work) should be ruled out in patients presenting with adult-onset asthma.

• **Asthma with persistent airflow limitation**: Some patients with long-standing asthma develop airflow limitation that is persistent or incompletely reversible.

This is thought to be due to airway wall remodeling.

• **Asthma with obesity**: Some obese patients with asthma have prominent respiratory symptoms and little eosinophilic airway inflammation.

3.SYMPTOMS OF ASTHMA:

The following features are typical of asthma and, if present, increase the probability that the patient has asthma:

Respiratory symptoms of wheeze, shortness of breath, cough and/or chest tightness:

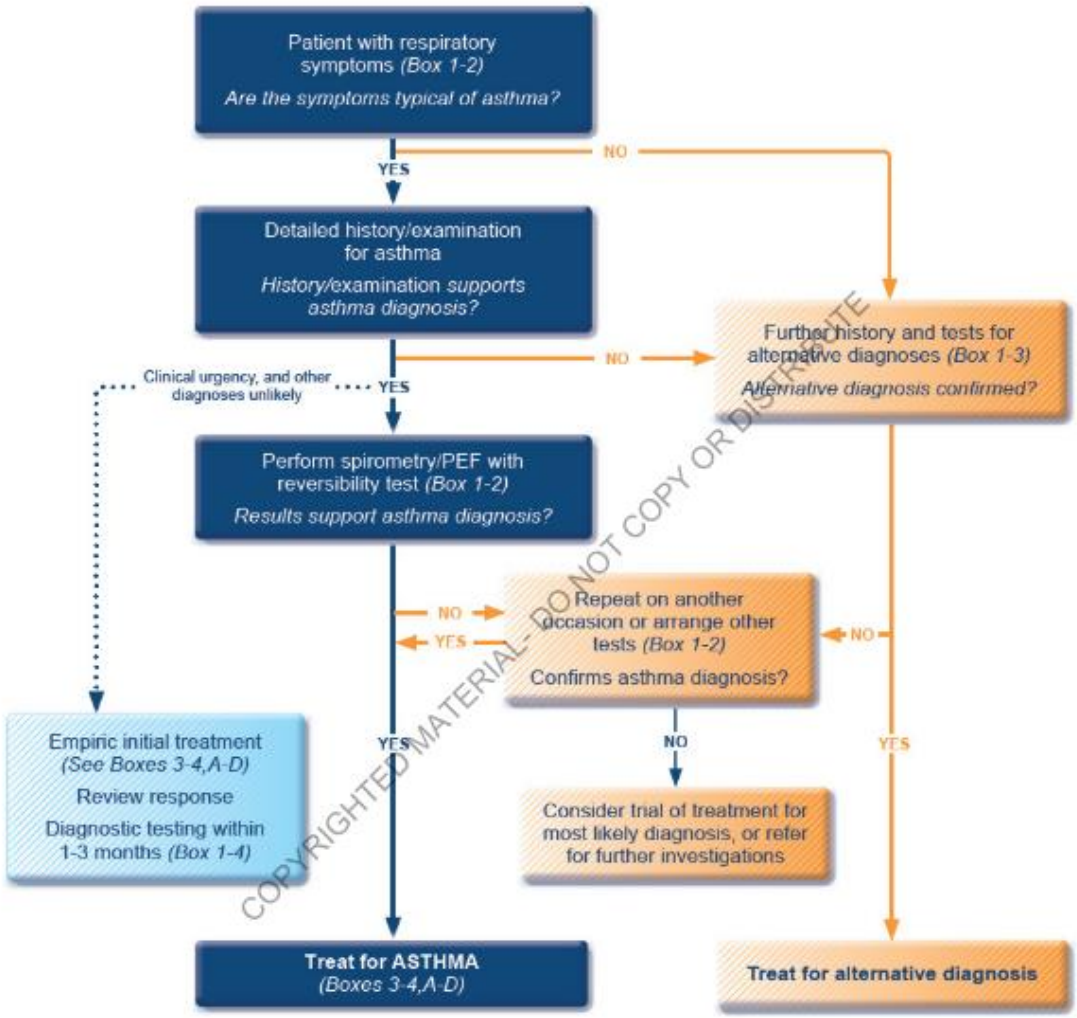
• Patients (especially adults) experience more than one of these types of symptoms

• Symptoms are often worse at night or in the early morning

• Symptoms vary over time and in intensity

• Symptoms are triggered by viral infections (colds), exercise, allergen exposure, changes in weather, laughter, or irritants such as car exhaust fumes, smoke or strong smells.

4.DIAGNOSTIC FLOWDIAGRAM FOR BRONCHIAL ASTHMA:

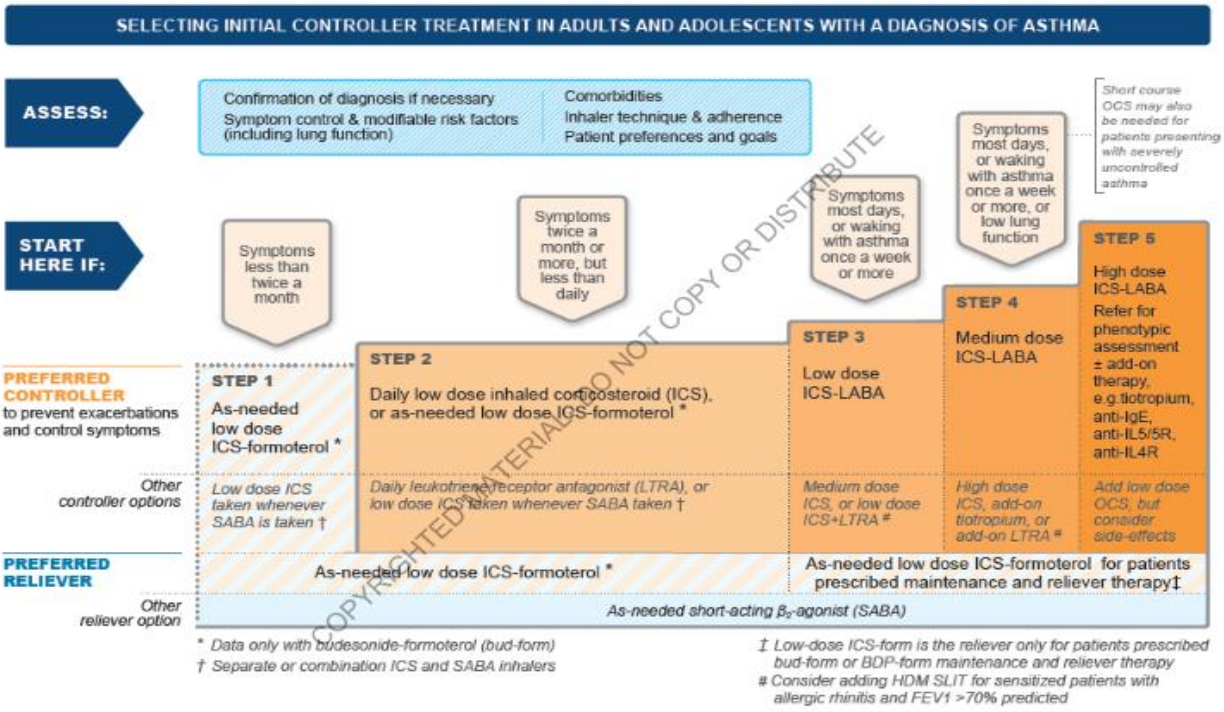


5.DIAGNOSTIC CRITERIA FOR BRONCHIAL ASTHMA:

DIAGNOSTIC FEATURE	CRITERIA FOR MAKING THE DIAGNOSIS OF ASTHMA
1. History of variable respiratory symptoms	
Wheeze, shortness of breath, chest tightness and cough Descriptors may vary between cultures and by age, e.g. children may be described as having heavy breathing	• Generally more than one type of respiratory symptom (in adults, isolated cough is seldom due to asthma) • Symptoms occur variably over time and vary in intensity • Symptoms are often worse at night or on waking • Symptoms are often triggered by exercise, laughter, allergens, cold air • Symptoms often appear or worsen with viral infections

2. Confirmed variable expiratory airflow limitation	
Documented excessive variability in lung function* (one or more of the tests below)	The greater the variations, or the more occasions excess variation is seen, the more confident the diagnosis
AND documented expiratory airflow limitation*	At a time when FEV_1 is reduced, confirm that FEV_1/FVC is reduced (it is usually >0.75–0.80 in adults, >0.90 in children[10])
Positive bronchodilator (BD) reversibility test* (more likely to be positive if BD medication is withheld before test: SABA ≥4 hours, LABA ≥15 hours)	*Adults*: increase in FEV_1 of >12% and >200 mL from baseline, 10–15 minutes after 200–400 mcg salbutamol (albuterol) or equivalent (greater confidence if increase is >15% and >400 mL). *Children*: increase in FEV_1 of >12% predicted
Excessive variability in twice-daily PEF over 2 weeks*	*Adults*: average daily diurnal PEF variability >10%** *Children*: average daily diurnal PEF variability >13%**
Significant increase in lung function after 4 weeks of anti-inflammatory treatment	*Adults*: increase in FEV_1 by >12% and >200 mL (or PEF† by >20%) from baseline after 4 weeks of treatment, outside respiratory infections
Positive exercise challenge test*	*Adults*: fall in FEV_1 of >10% and >200 mL from baseline *Children*: fall in FEV_1 of >12% predicted, or PEF >15%
Positive bronchial challenge test (usually only performed in adults)	Fall in FEV_1 from baseline of ≥20% with standard doses of methacholine or histamine, or ≥15% with standardized hyperventilation, hypertonic saline or mannitol challenge
Excessive variation in lung function between visits* (good specificity but poor sensitivity)	*Adults*: variation in FEV_1 of >12% and >200 mL between visits, outside of respiratory infections *Children*: variation in FEV_1 of >12% in FEV_1 or >15% in PEF† between visits (may include respiratory infections)

6.SELECTING THE INITIAL PHARMACOLOGICAL TREATMENT FOR BRONCHIAL ASTHMA:



7.NON PHARMACOLOGICAL INTERVENTIONS FOR ASTHMA:

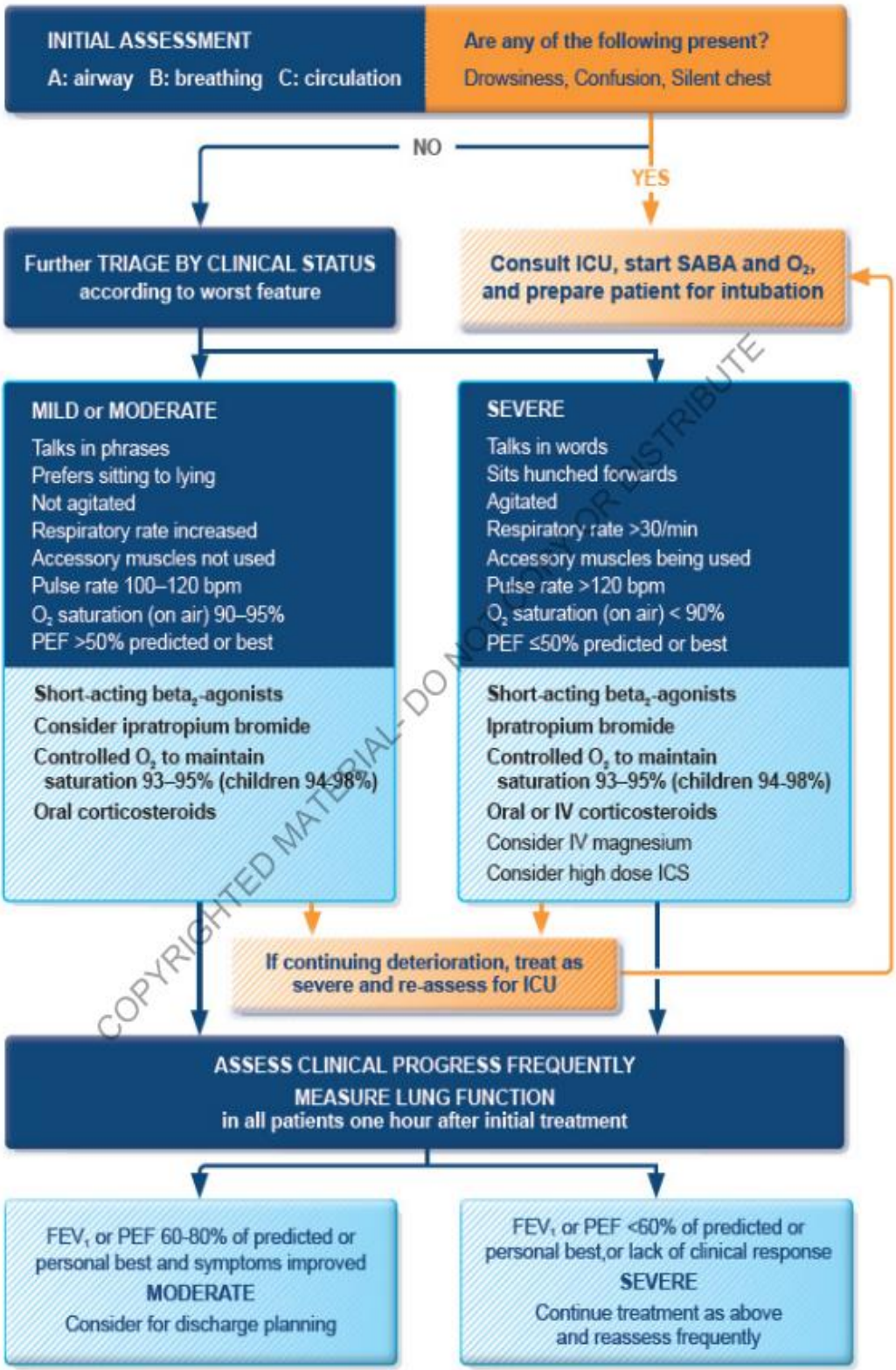
Intervention	Advice/recommendation (continued on next page)	Evidence
Cessation of smoking and ETS exposure	• At every visit, strongly encourage people with asthma who smoke to quit. Provide access to counseling and smoking cessation programs (if available)	A
	• Advise parents/carers of children with asthma not to smoke and not to allow smoking in rooms or cars that their children use	A
	• Strongly encourage people with asthma to avoid environmental smoke exposure	B
	• Assess smokers/ex-smokers for COPD or overlapping features of asthma and COPD (asthma–COPD overlap, ACO, Chapter 5, p.129), as additional treatment strategies may be required	D
Physical activity	• Encourage people with asthma to engage in regular physical activity for its general health benefits	A
	• Provide advice about prevention of exercise-induced bronchoconstriction with regular ICS	A
	• Provide advice about prevention of breakthrough exercise-induced bronchoconstriction with ○ warm-up before exercise ○ SABA before exercise ○ low dose ICS-formoterol before exercise	 A A B
	• Regular physical activity improves cardiopulmonary fitness, but confers no other specific benefit on lung function or asthma symptoms, with the exception of swimming in young people with asthma	B
	• There is little evidence to recommend one form of physical activity over another	D
Avoidance of occupational exposures	• Ask all patients with adult-onset asthma about their work history and other exposures	A
	• In management of occupational asthma, identify and eliminate occupational sensitizers as soon as possible, and remove sensitized patients from any further exposure to these agents	A
	• Patients with suspected or confirmed occupational asthma should be referred for expert assessment and advice, if available	A
Avoidance of medications that may make asthma worse	• Always ask about asthma before prescribing NSAIDs, and advise patients to stop using them if asthma worsens	A
	• Always ask people with asthma about concomitant medications	D
	• Aspirin and NSAIDs (non-steroidal anti-inflammatory drugs) are not generally contraindicated unless there is a history of previous reactions to these agents (see p.92)	A
	• Decide about prescription of oral or ophthalmic beta-blockers on a case-by-case basis. Initiate treatment under close medical supervision by a specialist	D
	• If cardioselective beta-blockers are indicated for acute coronary events, asthma is not an absolute contra-indication, but the relative risks/benefits should be considered	D
Healthy diet	• Encourage patients with asthma to consume a diet high in fruit and vegetables for its general health benefits	A

Intervention	Advice/recommendation	Evidence
Avoidance of indoor allergens	• Allergen avoidance is not recommended as a general strategy in asthma	A
	• For sensitized patients, there is limited evidence of clinical benefit for asthma in most circumstances with single-strategy indoor allergen avoidance	A
	• Remediation of dampness or mold in homes reduces asthma symptoms and medication use in adults	A
	• For patients sensitized to house dust mite and/or pets, there is limited evidence of clinical benefit for asthma with avoidance strategies (only in children)	B
	• Allergen avoidance strategies are often complicated and expensive, and there are no validated methods for identifying those who are likely to benefit	D
Weight reduction	• Include weight reduction in the treatment plan for obese patients with asthma • For obese adults with asthma a weight reduction program plus twice-weekly aerobic and strength exercises is more effective for symptom control than weight reduction alone	B B
Breathing exercises	• Breathing exercises may be a useful supplement to asthma pharmacotherapy for symptoms and quality of life, but they do not improve lung function or reduce exacerbation risk	A
Avoidance of indoor air pollution	• Encourage people with asthma to use non-polluting heating and cooking sources, and for sources of pollutants to be vented outdoors where possible	B
Avoidance of outdoor allergens	• For sensitized patients, when pollen and mold counts are highest, closing windows and doors, remaining indoors, and using air conditioning may reduce exposure to outdoor allergens	D
Dealing with emotional stress	• Encourage patients to identify goals and strategies to deal with emotional stress if it makes their asthma worse	D
	• There is insufficient evidence to support one stress-reduction strategy over another, but relaxation strategies and breathing exercises may be helpful	B
	• Arrange a mental health assessment for patients with symptoms of anxiety or depression	D
Avoidance of outdoor air pollutants/weather conditions	• During unfavorable environmental conditions (very cold weather or high air pollution) it may be helpful to stay indoors in a climate-controlled environment, and to avoid strenuous outdoor physical activity; and to avoid polluted environments during viral infections, if feasible	D
Avoidance of foods and food chemicals	• Food avoidance should not be recommended unless an allergy or food chemical sensitivity has been clearly demonstrated, usually by carefully supervised oral challenges	D
	• For confirmed food allergy, food allergen avoidance may reduce asthma exacerbations	D
	• If food chemical sensitivity is confirmed, complete avoidance is not usually necessary, and sensitivity often decreases when asthma control improves	D

NSAID: non-steroidal anti-inflammatory drugs; SABA: short-acting beta2-agonist

8.MANAGEMENT OF ASTHMA EXACERBATIONS:

Exacerbations of asthma are episodes characterized by a progressive increase in symptoms of shortness of breath, cough, wheezing or chest tightness and progressive decrease in lung function, i.e. they represent a change from the patient's usual status that is sufficient to require a change in treatment.



Annexure- II

VALUE ADDED COURSE

DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA & CT02

4. List of Students Enrolled OCT 2018 -NOV 2018

1st Year MBBS Student			SIGNATURE
Sl. No	Name of the Student	Roll No	
1	PRAVEENKUMAR.V	U14MB289	
2	PREMKUMAR. P	U14MB290	
3	PRIATHAM SWAMINATHAN.S	U14MB291	
4	PRITHVIRAJAN. R	U14MB292	
5	PRIYADHARSHINI.K	U14MB293	
6	PRIYADHARSHINI.P	U14MB294	
7	RAJALINGAM. N	U14MB295	
8	RAJESWARI. J	U14MB296	

RESOURCE PERSON

COORDINATOR

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure - III

DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA

MULTIPLE CHOICE QUESTIONS.

8/10

Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry

CANDIDATE AND ASSESSOR INFORMATION

Course code: CT02

Candidate Name	RAJALINGAM. M	Assessor Name	Dr. VIJAY KUMAR
Date of Assessment	20.10.2018	Assessor Position	ASSISTANT PROFESSOR & HOD

1. Asthma is basically:

A. An infectious disease

B. An autoimmune disease

C. An atopic disease

D. A malignant disease

2. The characteristic feature of persistent asthma is:

A. Family history of disease

B. Airway inflammation

C. Need for oral steroids

D. Nocturnal wheezing

3. Simple instrument to roughly determine lung function is a:

A.Barometer

B. Manometer

C.Peak flow meter

D.Sphygmomanometer

4. The following drug cannot cause asthma:

A. Beta-blocker

B. Histamine

C. Ibuprofen

D. Atropine

5. Which of the following tests cannot detect airway inflammation?

A.Bronchial mucosal biopsy

B. Sputum eosinophil counts

C. Bronchoalveolar lavage

D. Spirometry

6. The parameter to detect reversibility in airflow obstruction on a spirometry

test is:

A. FEV1

B. FVC

C. MVV

D. RV

7. The following bronchodilator is most commonly used when doing a reversibility test:

A. Salbutamol

B. Adrenaline

C. Theophylline anhydrous

D. Atropine

8. Bronchoprovocation tests usually use histamine to challenge the airways. Besides histamine, _____ can also be used:

A. Ipratropium bromide

B. Adrenocorticotrophic hormone

C. Prednisolone

D. Methacholine

9.In an acute severe attack of asthma, it is important to get a chest x-ray done to rule out:

A. A pleural effusion

B. A pneumothorax

C. Lung malignancy

D. COPD

10. The following are helpful in determining the severity of an acute attack except:

A. Use of accessory muscles of respiration

B. Ability to complete sentences

C. Peak expiratory flow rate

D. Pedal edema

SRI LAKSHMI NARAYANA INSTITUE OF HIGHER EDUCATON AND RESEARCH

Annexure - III

DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA

MULTIPLE CHOICE QUESTIONS.

8/10

Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry

CANDIDATE AND ASSESSOR INFORMATION

Course code: CT02

Candidate Name	PRAVEEN KUMAR	**Assessor Name**	DR. VIJAY KUMAR.
Date of Assessment	20.10.2018	**Assessor Position**	ASSISTANT PROFESSOR & HOD

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C. Peak expiratory flow rate

D. Pedal edema

Sri Lakshmi Narayana Institute of Medical Sciences

This is to certify that __Praveen Kumar.V(U14MB289)_____ has actively participated in the Value Added Course on DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA held during October - November 2018 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry - 605 502, India.

Dr. Prakash Rao Balan
RESOURCE PERSON

Dr. Vijay Kumar
COORDINATOR

Sri Lakshmi Narayana Institute of Medical Sciences

CERTIFICATE OF PARTICIPATION

This is to certify that __Rajalingam.M(U14MB295)_____ has actively participated in the Value Added Course on DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA held during October - November 2018 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 BRONCHIAL ASTHMA**

Subject Code: **CT 02**

Name of Student: RAJALINGAM H Roll No.: 211MB295

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

Signature

Date: 20 · 10 · 2018

Student Feedback Form

Course Name: **DIAGNOSIS AND TREATMENT OF BRONCHIAL ASTHMA**

Subject Code: **CT 02**

Name of Student: PRAVEEN KUMAR . V Roll No.: 0114MB289

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Sl. NO	Particulars	1	2	3	4	5
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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:

SATISFACTORY .

Signature

Date: 20 . 10 . 2018

Date: 10.11.2018

From

Dr. Vijay Kumar
Assistant Professor and Head,
Department of Microbiology,
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 MANAGEMENT OF BRONCHIAL ASTHMA

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: : **DIAGNOSIS AND MANAGEMENT OF BRONCHIAL ASTHMA , OCT – NOV 2018** for 8 interns . 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