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## Improving primary care physicians' capacity: A pan India initiative on management of chronic obstructive pulmonary disease and asthma

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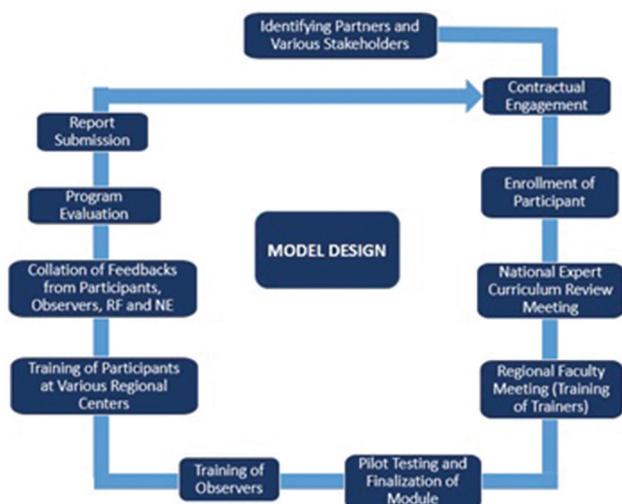
Sir,

According to the World Health Organization (WHO), chronic respiratory diseases including asthma and chronic obstructive pulmonary disease (COPD) accounted for 4.2 million deaths globally<sup>[1]</sup> in 2008. The number of people with asthma in India varies between 17 and 30 million patients.<sup>[2]</sup> According to the WHO (2004), India witnesses the largest number of asthma deaths (22.3% of all global asthma deaths) in the world. With rising burden of COPD and asthma and given its chronicity, primary care physicians (PCPs) need to be at the forefront for prevention and management of these conditions. Furthermore, the primary need for PCP involvement in chronic disease management is necessitated by the severe shortage of specialists both in rural and urban location. The density of doctors per lakh population was 64.9 (WHO 100/100,000), with the urban density four times higher than rural areas. To address these gaps, Public Health Foundation of India (PHFI) initiated a Certificate Course in Management of COPD and Asthma (CCCA) in 2016.

This certificate course is designed and delivered by PHFI in collaboration with Chest Research Foundation, Pune, Narayana Health, Bangalore, and is partly supported by an educational grant from GlaxoSmithKline Pharmaceuticals

Ltd. The program was launched with a primary objective of enhancing knowledge, skills, and core competencies of PCPs in the management of COPD, asthma, and related complications. The program has also enabled establishment of strong networks between PCPs and specialists, thus strengthening the patient referral system. This is an interdisciplinary, on-job, 8-month-modular program, supported by a panel of 16 national experts, delivered by 24 pulmonologists across 24 centers and monitored by 19 observers across India.

The course pedagogy has been developed after multiple discussions with multiple stakeholders involved in medical education and health-care delivery system in India. The course content has been discussed in larger forums along with the updates and feedback of the curriculum received throughout the year to keep it evidence based and incorporate the recent advances. The curriculum includes simple diagnostic tests using peak flow meter and spirometer and also correct technique of using the inhaler devices. The content has rich case studies and is evidence based. The course has been designed to evaluate knowledge gain through tests prior and after each module and through different tools designed specific to the course curriculum. To ensure training quality and standardized delivery of course curriculum, the program encompasses a robust monitoring and evaluation



**Figure 1:** Capacity building model for Certificate Course in Management of COPD and Asthma

system that includes onsite and offsite monitoring of training session by panel of observers who are health-care professionals or public health specialists [Figure 1].

CCCA was able to train more than 500 participants in the 1<sup>st</sup> year from 145 districts. Participants from remote districts have also attended the program, thus allowing CCCA to penetrate into the farthest periphery of health care. Out of the 503 enrolled participants, 31% are from government sector, with average clinical experience of 14 years, average age of 42 years, and 40% being postgraduates (MD/MS or Diploma). The compliance rate for the course is 85%, which attests the seriousness of the participants. Assessment of knowledge of respondents revealed a remarkable improvement in the knowledge in diagnostic capacity and management of chronic airway diseases. After the completion of the course, around 98% understand that a patient can present both with asthma and COPD. Despite having a good academic knowledge among the respondents, 51% of them believed metered-dose inhalers to be the most efficacious and safest inhalation device as against 86% being confident after the course. Around 91% participants believed that chest X-ray findings are not important while evaluating effectivity of pulmonary rehabilitation against 53% participants being knowledgeable of this fact before the course. Further evaluation revealed that 93% respondents were aware of widening of intercostal spaces as a chest X-ray finding for COPD after the course. Surprisingly, only 38% of the respondents recognized postbronchodilator forced expiratory volume in 1 s/forced vital capacity <70% as an obstruction criterion for PFT before the course against 83% after the course. The increased participation and the uniqueness of the course have led to its adoption by government organizations such as Kolkata Municipal Corporation, Government of West Bengal, and National Health Mission, Government of Gujarat and Assam, for training of government medical officers.

We believe that the CCCA model is unique and can be adopted at various health-care settings for building capacity of PCPs and to impart quality health care even to the farthest parts of India. This model is recently endorsed by the International Primary Care Respiratory Group for 5 years and planned to be piloted in several other countries.

### Acknowledgment

We thank the entire team from Chest Research Foundation, Pune, and Dr. B V Murali Mohan and his team from Narayana Health, Bengaluru, for their valuable contributions in the development of course curriculum of “Certificate Course in Management of COPD and Asthma” and GlaxoSmithKline Pharmaceuticals Ltd., for their educational grant for the same.

### Financial support and sponsorship

None.

### Conflicts of interest

There are no conflicts of interest.

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<b>Quick Response Code:</b> 	<b>Website:</b> <a href="http://www.lungindia.com">www.lungindia.com</a>
	<b>DOI:</b> 10.4103/lungindia.lungindia_36_18

**How to cite this article:** Bhalla S, Sinha SK, Jain S, Gupta P, Kumar P, Chandwani H, et al. Improving primary care physicians' capacity: A pan India initiative on management of chronic obstructive pulmonary disease and asthma. Lung India 2018;35:452-3.  
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