

Title: Impact of Point-of-Care Spirometry on the Diagnosis and Management of Obstructive Airways Diseases in Clinical Practice: An Interim Analysis of a Nationwide Survey

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Introduction: Asthma and COPD contribute significantly to morbidity and mortality in India, yet both remain underdiagnosed due to limited use of spirometry in routine practice. Point-of-care spirometry offers a simple, affordable, and objective tool that facilitates early detection and treatment decisions, ultimately improving patient care in obstructive airway diseases. This survey aimed to assess doctors' perceptions regarding the role of point-of-care (POC) spirometry in enhancing the diagnosis and management of obstructive airway diseases in routine clinical practice.

Methods: The survey was conducted across India in collaboration with a partner engaged in the manufacturing and marketing of spirometers. Purposive sampling was used, enrolling clinicians currently using a POC- spirometer (Spirofy™) for at least 1 month.

Results: 100 clinicians (71% pulmonologists, 14% pediatricians, 8% consulting physicians and 5% general practitioners) participated in the survey. Key clinical benefits of point-of-care spirometry included timely diagnosis of asthma/COPD (94.23%), enhanced diagnostic confidence (92.31%), improved health outcomes (91.35%), support in disease management planning (93.27%), and reduced risk of losing patients (80.77%). Clinicians reported that the device was easy to operate (94.23%) and could be seamlessly integrated into routine practice (91.35%). Patient-related benefits included greater acceptability of the diagnosis (91.35%), improved compliance with treatment (87.5%), positive feedback about their experience with the device (86.54%), and savings in patients' time, cost, and effort (92.3%). Despite longer consultation times, 86.5% of clinicians felt that the availability of POC spirometry in their clinics outweighed the challenges. Overall, 89.4% recommended Spirofy™ to peers, acknowledging its value in routine practice.

Conclusion: Point-of-care spirometry demonstrates strong clinical, patient, and physician benefits, with minimal challenges outweighed by advantages. Its integration into routine clinics can substantially enhance timely diagnosis and optimize management of obstructive airway diseases in practice.

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