Impact in India

37 million
estimated cases of COPD in India

Rs. 37,326 (US$468)
maximum annual direct and indirect cost for COPD in 2018

127,000
children under-five die from pneumonia each year

AIM

To estimate the burden of acute and chronic respiratory diseases and test the feasibility and effectiveness of primary care delivered interventions

	STUDIES	EVIDENCE	IMPACT
Early screening of childhood pneumonia	Pulse oximetry in primary health care facilities	Feasible to implement by 59% increase is use of pulse oximeters and subsequent respiratory tract infections. Reduced misdiagnosis. Timely treatment	✔ Pulse oximetry introduced into routine child health services in 6 primary health care centres (PHCs) ✔ State-level IMCI guidelines updated and primary care teams trained ✔ Increased access for tribal populations visiting PHCs
Estimating the burden of chronic respiratory diseases	Prevalence of chronic respiratory diseases	56% of participants had at least 1 respiratory symptom. Prevalence of asthma (16%), COPD (4.5%) and other chronic respiratory diseases (3%)	✔ Multi-country extension to assess and address burden of chronic respiratory disease in the region
	Developing spirometry predictive values	First ever spirometry values for rural western Indian populations: smaller lung volumes compared to European-Americans and North Indians	✔ New spirometry predictive values will increase accuracy of diagnosis to ensure appropriate treatment and management ✔ Plans for a larger follow-up study
Improved management of chronic respiratory diseases	Community health worker-delivered intervention	Health workers able to accurately screen and detect disease. Reduced time between referral and visit. Improved inhaler use, reduction in biomass fuel use and exacerbations	✔ Agreement with State Health Department to promote policies at community level ✔ Training of community health care workers across the state
	Teleconsultation	Telecommunications centres need to be appropriately located, supported by trained staff and resources, negotiating stakeholder support	✔ Designed an improved service and negotiated government support for and upgraded and upskilled centre for rural villages surrounding Pune, Maharashtra
	Pulmonary rehabilitation	Feasible and accepted by rural populations with low health literacy. Improved quality of life. Peer volunteers acted as motivators	✔ First centre set up in rural western India, to be continued with nominal user fees. ✔ Staff offered full-time positions ensuring sustainability of service

RESPIRE-tested interventions can:

- ✔ support early screening and diagnosis of childhood pneumonia and chronic respiratory disease
- ✔ be implemented by non-specialist staff, primary and community health workers and supported by peer volunteers
- ✔ increase access to respiratory health services for underserved populations in hard to reach areas
- ✔ improve respiratory health outcomes and quality of life and increase productivity
- ✔ improve primary care management of chronic respiratory diseases

RESPIRE phase 1 partners in India:

Find out more at: ed.ac.uk/usher/respire

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