



# FRESH AIR

## WP 3: Making the case for action

## Aim

The aim of this study is to develop a knowledge base supporting the development of an effective implementation policy towards non-communicable lung diseases in rural community settings of LMICs, by providing useful data for the other FRESH AIR studies concerning prevention-, diagnosis- and treatment intervention.

## Tasks

- Quantitative analysis of the prevalence (expected and observed) of lung diseases and exposure to risk factors in the selected countries
- Qualitative research on beliefs and perceptions of respiratory symptoms and their causes and resultant clinical and patient behaviours in the selected countries.
- Systematic review of literature on critical factors for the successful implementation of evidence-based interventions to prevent lung diseases in LMICs
- State-of-the-art knowledge base
- Advocacy

## Lead



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## Objectives

- To identify the expected and observed burden of lung diseases and exposure to risk factors, including household air pollution (HAP) and tobacco consumption
- To explore beliefs and perceptions of respiratory symptoms and their causes and resultant clinical and patient behaviours
- To identify critical factors hampering successful implementation of evidence-based interventions to prevent and treat lung diseases and engage the community to want to find solutions
- To use this research to raise awareness of the scale and importance of the problem of lung diseases and exposure to risk factors, including HAP and tobacco

consumption, amongst policy makers and other key stakeholders and make the case for increasing capacity to address these.

## Background

The link between exposure to smoke, including tobacco smoke, indoor and outdoor environmental exposure and lung diseases is well established by existing research (1). Data shows that the greatest burden of lung disease occurs in low-resource settings. According to the World Health Organization over 90% of COPD deaths and over 80% of asthma deaths occur in LMICs (2). Data about the prevalence of lung disease and exposure to risk factors in LMICs is limited, but is essential for an effective approach. There is insufficient evidence about the specific risk factors experienced by communities in low-resource settings and the role of age and gender in risk exposure (1). LMICs are seriously under-represented in current research into lung diseases. For example, a recent study on tobacco use found that only 4% of RCTs included in systematic reviews and 2% of on-going trials were performed in LMICs, even though these countries represented 70% of the mortality related to tobacco use.(3)

Extrapolations from Western countries to low-resource settings are particularly prone to errors about the balance of risk caused by indoor and outdoor air pollution.(4) Risk factors are influenced by local economic, social, cultural and other contextual factors that need to be understood in order to develop appropriate prevention and management strategies. Diagnosis and treatment of lung disease in low-resource settings is hampered by barriers including poor public awareness of lung disease and its risk factors, lack of knowledge and engagement of policy makers, limited access to trained health care professionals, diagnostic facilities and treatment options.

Local beliefs, perceptions and behaviours regarding chronic respiratory symptoms are unclear. Almost half of the world's population rely on biomass fuel for cooking and heating. It has been projected that within 25 years, 10 million tobacco-related deaths will occur annually, with 70% of these deaths in lower-income and middle-income countries. It is estimated that roughly 25 million premature deaths in the first quarter of this century and about 150 million more by mid-century might be avoided if half of the active smokers were to quit. (5) However in many low- and middle-income countries, government officials, healthcare workers and the public are not aware of the damage caused by exposure to biomass smoke and tobacco smoke.(6, 7) For the development of an effective policy concerning prevention, diagnosis, treatment and implementation, knowledge on this matter is essential.

## References

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