

A breath of fresh air for chronic lung disease sufferers in low-income countries

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Effective prevention, diagnosis and treatment of chronic lung diseases in

disadvantaged areas? An international team of scientists shows us how to do it.

According to the World Health Organization, more than 250 million people around the world suffer from chronic [obstructive pulmonary disease](#) (COPD), and around 235 million from asthma. The vast majority of deaths resulting from these diseases occur in low and [middle-income countries](#). While effective steps have been taken to prevent and treat [chronic lung diseases](#) in high-income areas, applying these measures to low-resource areas where such diseases are more prevalent remains a challenge.

The EU-funded FRESH AIR project was launched to address the need for measures to prevent, diagnose and treat non-communicable lung diseases in low- and middle-income countries and in vulnerable populations in higher-income countries.

FRESH AIR has focused on adapting current knowledge and evidence-based interventions that have been effective in high-income regions to the practical challenges that exist in low-resource settings. This approach, known as 'implementation research', has been applied in four target countries: Greece, Kyrgyzstan, Uganda and Vietnam.

Exposure to tobacco smoke and indoor and [outdoor air pollution](#) – the primary causes of COPD – are prevalent in all four countries. Although there's a relatively high level of awareness in Greece about the health hazards of burning wood or coal for heating, many people can't afford to use modern heating devices in their homes because of ongoing austerity measures. Further exacerbating the problem, Greece has one of the highest rates of tobacco use in the EU (38 percent of the population). Exceptionally high smoking rates among men are also to be found in Kyrgyzstan (47.4 percent), and Uganda and Vietnam (56.1 percent). This is coupled with low public awareness of the hazards of smoke and

extensive use of biomass fuel for heating.

Health measures on the ground

FRESH AIR has tackled these issues through a number of effective approaches, such as rehabilitation programmes, qualitative and quantitative research projects, and training programmes. Through the project, Ugandan health workers have taught local communities about the dangers of household air pollution. COPD patients in Greece and Vietnam have completed pulmonary rehabilitation programmes tailored to their particular cultures. In Kyrgyzstan, general practitioners (GPs) have benefited from a training seminar on reducing smoking.

The project's tailored interventions have led to improvements in the health of COPD and asthma patients in the targeted communities, while also enabling participating healthcare workers to better their skills and knowledge. Online training in spirometry – the measurement of air capacity in the lungs – was provided to GPs in all four countries. This has made it possible for GPs using modern diagnostic spirometers to receive feedback on each spirometry performed. By raising awareness and distributing clean cooking stoves, FRESH AIR has also helped to reduce indoor [air pollution](#).

"A key lesson we have learned is that collaboration is vital to success. The involvement of not only practitioners, but also patients and other local stakeholders ensures a sense of ownership of the project and its results. And it will help to make sure that interventions introduced will continue beyond the project's lifetime," says project coordinator Rianne van der Kleij, from the Leiden University Medical Center, in a news item posted on the News Medical website.

The knowledge generated by FRESH AIR (Free Respiratory Evaluation and Smoke-exposure reduction by primary Health cAre Integrated

gRoups) will be disseminated to improve prevention, diagnosis and treatment of non-communicable lung diseases in other contexts and contribute to improved global policy.

More information: FRESH AIR project website:
freshair.world/freshair

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