The problem

Globally, the number of deaths from COPD and the prevalence of asthma is increasing.

The link between tobacco smoke and indoor air pollution and lung disease is well established.

80% of asthma deaths occur in low-resource settings.

90% of COPD deaths occur in low-resource settings.

1.8 billion people will still rely on biomass for cooking and heating in 2040.

A lack of awareness about the risks exacerbates the problem.

Exposure to smoke in pregnancy leads to miscarriages, early delivery and low birth weight and can harm children’s lung and brain development.

Implementation research is needed to test how interventions can work in low-resource settings.

Estimates suggest there will still be 2 billion smokers by 2040.

Interventions from FRESHAIR

- Increased knowledge on COPD and asthma
- Raised awareness of harm of tobacco and biomass smoke, particularly to pregnant women
- Offered households a choice of cleaner cook stoves
- Patients and communities involved in translation of materials and implementation, analysis and dissemination of research
- Use of photography, film, art, dance and patient stories to build positive messages
- Engaged community members as peer researchers
- Healthcare professionals trained and mentored in diagnosis using spirometry
- Improved tools for diagnosis and treatment
- Improved lung health in infancy
- Culturally-tailored information for parents of children with asthma
- Research on perceptions of and treatments for childhood cough and wheeze, raising questions about appropriate diagnosis
- Midwives able to teach new mothers about harm of smoke
- Frontline staff taught to deliver Very Brief Advice
- Pulmonary rehabilitation adapted to community-based programmes
What we have learnt from FRESHAIR

Chronic lung diseases have an under-researched socio-economic impact — people may not take time off work but they are less productive.

Where infectious disease is prevalent, asthma diagnosis is missed.

Implementation research needs to be underpinned with actions that build trust in the process and workforce and ensure local compatibility.

Pulmonary rehabilitation sessions can be run affordably and effectively in the community.

Communities want to improve the quality of the air they breathe.

Evidence-based education and training interventions can be used to build implementation capacity e.g. teach the teacher models.

Very Brief Advice for smoking cessation can be delivered, but challenges remain due to lack of availability of smoking cessation medication and counselling.

Education and training interventions should include a wide spectrum of healthcare professionals and community health workers (not just doctors).

Recommendations

The knowledge and other benefits generated by the project need to be sustained in the face of competing health priorities.

Implementation of effective interventions depends on a data-driven case for change to be established and owned by local stakeholders.

Data has been lacking on the size of the problem and the feasibility of solutions, including their affordability and cost-effectiveness.

FRESHAIR can offer clinical data and implementation data on demographics, risk factors, healthcare utilisation, quality of life, and direct and indirect costs of diagnosed respiratory patients to build those cases for change.

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