

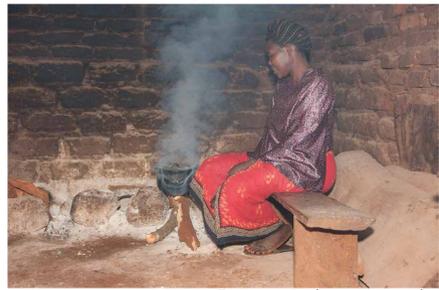
# The development and implementation of a lung health awareness programme in a rural district of Uganda

Frederik van Gemert<sup>1</sup>, Bruce Kirenga<sup>2</sup>, Rupert Jones<sup>3</sup>, Sian Williams<sup>4</sup>

<sup>1</sup>Department of General Practice, Groningen Institute for Asthma and COPD, University Medical Center Groningen, the Netherlands; <sup>2</sup>Makerere University Lung Institute, Kampala, Uganda; <sup>3</sup>Peninsula Medical School, University of Plymouth, United Kingdom; <sup>4</sup>International Primary Care Respiratory Group, London, United Kingdom

## Introduction

While tobacco smoking is seen as the main cause of chronic obstructive pulmonary disease (COPD), in sub-Saharan Africa biomass fuel use for cooking and heating is emerging as a significant risk factor for this disease.<sup>1</sup>



Exposure to biomass smoke

The FRESH AIR Uganda survey found a prevalence of spirometry-based COPD of 16.2%; almost 40% of them were aged between 30 and 39 years.<sup>2</sup> Unfortunately, COPD is an unknown disease, both in public awareness and in health planning. People are unaware of the damage to health caused by tobacco and biomass smoke.<sup>3,4</sup>

## Aims

- Creating a cascading “train-the-trainer” module to train health care workers (HCWs) and unpaid community health workers (CHWs)
- Raising awareness in the community in Masindi district about lung health and the damaging effects of tobacco smoking and exposure to biomass smoke by trained CHWs

## Methods

### Needs assessment

To understand HCWs, CHWs and the community needs for lung health information, we had meetings and interviews with stakeholders including politicians, all level of health workers and people in the villages. Their feedback led to changes, and strategy and materials were adapted.



Meeting with stakeholders in a rural village

## Preliminary education materials

The initial training package for the professional HCWs was designed by the project team. The materials to educate the HCWs addressed:

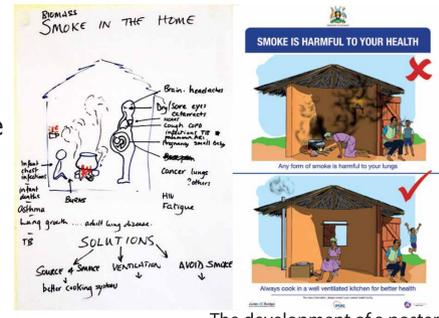
- Tobacco smoke and other forms of smoke
- Biomass smoke and other forms of air pollution
- Impact of exposure at different times in peoples’ lives.



Training of health care workers

## Development of community education materials

The project team worked together with a selected group of HCWs to produce draft education materials. For sensitizing the community, the HCWs wanted flip-over charts for the CHWs which had pictorial messages on one side for the community and text on the reverse with main messages to be addressed. Posters were needed at the different health centers.



The development of a poster

## Train-the-trainer process

The cascading approach was central in this project.

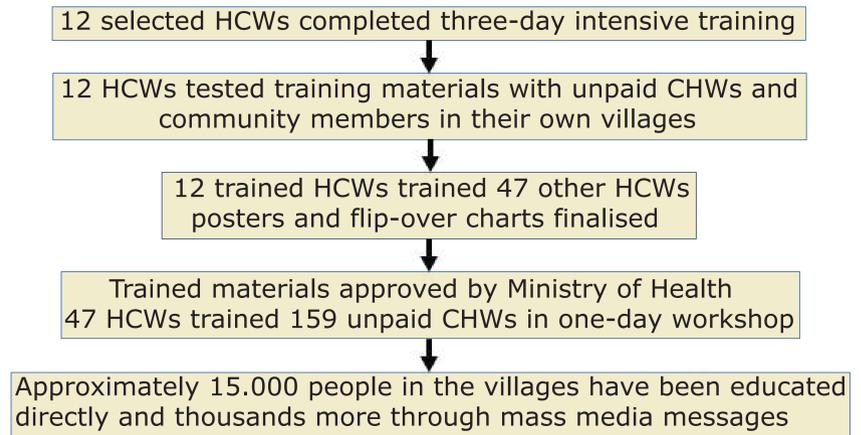
- The selected group of HCWs trained a new cohort of HCWs
- Each HCW was responsible for CHWs in villages closest to their health facilities
- The CHWs then trained people in their villages using flip-over charts



Example of a page of the flip-over chart

## Results

The content and presentation of the education materials evolved through the life of the project, and were adapted based on feedback.



A local radio station with a large audience was selected to promote community awareness with local radio hit adverts and talk shows.

The knowledge of the professional HCWs (trained by the 12 HCW trainers) and CHWs (trained by the HCWs) was evaluated using a questionnaire before and after the awareness training (% correct answers):

	before training	after training
HCWs (n=25)	74%	89%
CHWs (n=103)	76%	91%



Training given by community health worker

The CHWs are fundamental to the provision of primary preventive and curative health care, especially in rural areas where high-level health professionals may not be available. The cascading approach enabled continuation after the completion of this project.

Community health workers (CHWs) embraces a variety of community health aides selected, trained and working in the communities from which they come. CHWs may be men or women, young or old, salaried or volunteer, full-time or part-time (WHO 2007).

## Conclusions

- It is possible to teach local communities about lung health in a cascading approach and to convey the message about the damaging effects of biomass smoke and tobacco smoking
- The lung health programme was embedded in the local community health system using professionals health care workers and unpaid community health workers to deliver it, with involvement of local administrators including the District Health Officer
- The role of health care workers and community health workers is crucial if problems of non-communicable diseases such as chronic respiratory diseases are to be addressed
- Raising awareness about the damaging effects of tobacco smoking and exposure to biomass smoke is crucial before any intervention programme will commence

The final flip-over charts and posters are available on line at <http://theipcr.org/display/TeachColleagues/Education+about+Tobacco+Dependence+IPCRG+and+Global+Bridges+Uganda>  
A film can be watched at <https://www.globalbridges.org/news/blog/2016/10/18/video-ipcrs-tobacco-dependence-treatment-education-uganda/#.WZGZqPvyt0w>

## References

- <sup>1</sup>Gordon et al, respiratory risks from household air pollution in low and middle income countries, *Lancet Respir Med* 2014
- <sup>2</sup>van Gemert et al, prevalence of chronic obstructive pulmonary disease and associated risk factors in Uganda (FRESH AIR Uganda): a cross-sectional observational study, *Lancet Global Health* 2015
- <sup>3</sup>van Gemert et al, impact of chronic respiratory symptoms in a rural area of sub-Saharan Africa: an in-depth qualitative study in the Masindi district of Uganda, *Prim Care Respir J* 2013
- <sup>4</sup>Adeloye et al, an estimate of the prevalence of COPD in africa: a systemic analysis, *COPD* 2015