

# FRESH AIR Uganda Study

Free Respiratory Evaluation and Smoke-exposure reduction by primary Health cAre Integrated gRoups

## Letter no 1

The pilot survey has been a great success and we have learnt a lot to manage the prevalence survey next year.

Masindi, a district in the midwest part of Uganda, has a population of about 600.000 people. It has an ethnic composition of 55 tribes. The population is predominantly rural. Agriculture is the main economic activity. It is one of the poorer districts of Uganda.

First of all, we drove to 9 villages in 3 different counties, and made appointments with all the village leaders (local council chairpersons, LC 1). Later on Nahid, the sociologist, had focus group discussions with 15 women, 15 men and 15 community leaders. At the same time, I would use the questionnaires and perform spirometry with solar energy. Celeste Eggermont, a 18 year old student from Rotterdam, helped me tremendously, and our driver Hussein, translated a lot (he spoke Lunyoro, one of the local languages).

The knowledge of obstructive respiratory diseases is very poor. They know a lot about TB, but if people with symptoms have no TB, they are in trouble. Asthma is known by the medical officers and clinical officers (sort of paramedics), but don't understand the disease; the nurses know the name asthma but don't know how to manage it. In Masindi, the capital of this district, all you can get are salbutamol tablets. When the patient has an acute exacerbation, they treat you with antibiotics and epinephrine. They know nothing about disease management. COPD is not known at all.

More than 90% of the rural population use wood as biomass fuel and spent average 4 to 8 hours cooking inside. Some women use charcoal too. They cook inside, because cooking outside (with wind) means more use of wood, and this they can't afford. The tradition says girls between the age of 5 and 12 have to learn the art of cooking, and spent a lot of hours inside during the cooking. Most of these children have respiratory symptoms. Smoking depends very much which tribe they belong: some don't smoke at all, and some tribes smoke a lot, even young children. They use most of the time their own leaves as tobacco. The men often smoke inside, even under the mosquito-net. Local tradition influences them a lot. If we want to do anything, we should involve the whole family.

Most of the people we saw during the focus group discussions and spirometry, had respiratory symptoms like coughing with or without sputum, and many complained about shortness of breath. Most of the children in the villages were coughing or wheezing. Stigmatization is very common, and in several tribes, the coughing men or women were even outcasts. More than 25% of the at-risk participants (smoking men or cooking women) who underwent spirometry (n=37), had COPD. Two of them had combined asthma and COPD, and two had airtrapping.

I have spoken to several healthcare workers. The District Health Officer, John Turyagaruka, was very much interested in our survey, realizing a lot can be changed. He agreed education of the healthcare workers had to be a priority. John is responsible for all the health services in the district of Masindi. The district has 27 healthcare centers: 1 hospital in Masindi, 1 HC 4 (2 medical officers with an operating theater), 7 HC 3 (run by clinical officers) and 18 HC 2 (run by nurses or nurse assistants). If

a HC 2 can't help a patient, they refer to a HC 3 etc. Often this doesn't work because the people have to travel too far.

We will need the help of the District Health Officer to organize an education program. John told me he can organize a meeting for all the interested healthcare workers if we can give a program in 2 or 3 consecutive days (for 2 or 3 different groups). This would be perfect. Furthermore, organizing the prevalence survey from the different healthcare centers would be very feasible. We can also arrange motorcycles (called bora-bora, meaning from boarder to boarder), for instance for the HC 4 and HC 3, so the nurses can visit the villages to conduct the survey with spirometry. If we want to work with the hospital, HC 4 and HC 3, we would need 9 laptops, 9 spirometry, 9 solar energy devices, and 8 bora-bora's (not for the hospital).

Several things have to happen:

- The questionnaires have to be adapted to local conditions. I have made several changes already. I'll send them to you later on.
- The CCQ has to be translated in Swahili and Lunyoro. Nahid will look for an official translator and mail me the address. Asking the questions in English to the driver, who spoke Lunyoro, and a second person translating the question in Swahili to ask a woman who never has been educated, is asking for trouble. I'll contact Thys about this.
- An education program should be made to increase the knowledge on obstructive lung diseases. At the same time spirometry will have to be taught to several nurses (1 or 2 in each HC). I can plan this temporary end of this year (November/December)
- The Practical Approach to Lung Health (PAL) should be introduced to the local healthcare workers.
- The proposal of the Fresh Air Uganda Survey has to be rewritten, using the information we got from the pilot-survey.
- A budget of the survey on the prevalence of COPD and its risk factors in the district of Masindi has to be made.

I've submitted 2 abstracts for the scientific meeting of the IPCRG in Amsterdam (May 2011): one about the results of this pilot survey and another about the prevalence of COPD and its risk factors as a research idea. Let us hope they will be accepted.

I have a feeling this survey will be a major one concerning COPD and biomass fuel use. As I wrote in the first abstract about the pilot survey, the development of local expertise in the provision of healthcare and in the healthcare research should be an integrated component of the proposed research. A successful intervention gives a opportunity of introducing and maintaining the reduction of exposure to biomass smoke in a wider community. Even micro-credits for the local people should be possible for intervention programs making chimneys and adapting their cooking areas. Focusing the prevalence survey at first-level health facilities (HC 3 and HC 4), and involving the whole family, makes the survey country-specific, dealing with cultural differences and local beliefs.

Once again, I would like to thank Nahid Nabadda for her work, Anna Nakanwagi for her advices, Celeste Eggermont for her enthusiasm and Hussein Mpanga for his work as driver and translator.

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