High prevalence of tuberculosis in a military camp in DR Congo: a cross-sectional survey

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1. Background
- Military personnel and their dependent families are suspected to be at high risk of TB, due to living in a (semi-)closed community, facilitating person-to-person transmission.
- In the DRC, the burden of TB is very high, with a prevalence of 549 per 100,000 inhabitants in 2013. (WHO Tuberculosis Report 2014)
- As military personnel is considered as a high-risk group, prevalence of TB is estimated even higher within this population.

2. Methods
- From May 7th till May 11th 2014, a cross-sectional, observational survey was done to map TB prevalence and risk factors influencing TB in Camp Saïo, a military camp in Bukavu, South-Kivu, DRC.
- 4296 cases were included, from 2672 households.
- Data were collected using adapted WHO questionnaires, including general demographic information, socio-economic conditions, risk factors and current symptoms.
- If symptoms suggestive for TB were present, medical history was inquired and 2 sputum samples were collected on the spot.
- Sputum samples were sent to provincial TB labs for analysis with Ziehl-Neelsen microscopy and GeneXpert.

3. Results

3.1 TB prevalence
- An average household in Camp Saïo consists of a median of 4 (IQR: 3-6) persons in 2 (IQR: 1-2) rooms.
- Less than half the participants (41.7%) was active in the army (73.6% of men vs. 5.8% of women, P<0.001).
- Of men, 37.2% stated to have been out of the camp for more than one month during the past year. Only 9.6% of women stated so (P<0.001).
- More than 1 in 5 (21.3%) never attended school. Of the schooled population, 1 in 3 (31.4%) only attended primary school.
- Indoor smoking was present in 45.7% of the households, in 39.5% on a daily basis.
- The majority of households (67.8%) reported not to purify water.
- Most households had access to electricity (93.4%) and mobile phones (80.9%).

3.2 Characteristics of TB cases
- TB cases were significantly less likely to have had education, access to electricity and mobile phones.
- A significant larger proportion was exposed to indoor smoking, active in the army and away from the camp for long periods.
- There is a tendency to delay help-seeking behavior: 56.2% never consulted a physician for their symptoms.

4. Conclusions
- Prevalence of TB is very high (4090 per 100,000), over 7 times the national TB prevalence (549 per 100,000).
- Systematic screening, follow-up of treatment and a performant first line health care system should help to reduce case load in the camp.
- Better socio-economic circumstances (no indoor smoking, electricity, education…) could possibly limit the spread of TB.
- Similar surveys in other high-risk populations could assist in developing specific policies to diminish the impact of TB.