

#### OBJECTIVE:

To determine the status of environmental and occupational lead exposure in selected areas in Nairobi, Kenya.

#### DESIGN:

Cross sectional study.

#### SETTING:

Kariobangi North, Babadogo, Waithaka and Pumwani for assessment of environmental exposure to lead (Pb) and Ziwani Jua Kali works for assessment of occupational lead exposure. Olkalou in Nyandarua District was the covariate study area.

#### SUBJECTS:

Three hundred and eight children and adults participated.

#### RESULTS:

Blood lead levels (BLLs) obtained for the entire sample (n = 308) ranged from 0.4 to 65 microg/dl of blood. One hundred and sixty nine (55%) of the total sample had levels equal to or below 4.9 microg/dl, while 62 (20%) of the sample had levels ranging from 5.0 to 9.9 microg/dl. Blood lead levels above 10 microg/dl were recorded in 77 (25%) of the total sample. Within Nairobi, 32 (15.3%) of the study subjects in areas meant for assessment of environmental lead exposure had levels above the WHO/CDC action levels of 10 microg/dl of blood. The mean BLL for the occupationally exposed (Ziwani Jua kali) was 22.6 +/-13.4 microg/dl. Among the workers, 89% had BLLs above 10 microg/dl. In general, 15% of the entire sample (for both environmental and occupational groups) in Nairobi had BLLs above 15 microg/dl. The covariate group at Olkalou had a mean BLL of 1.3 +/-0.9 microg/dl.

#### CONCLUSION:

The prevalence of environmental lead exposure to the general public is high in Nairobi compared to Olkalou where non exposure was reported. Occupational lead exposure has been identified to be at alarming levels and urgent intervention measures are recommended.

