

A population-based survey of prevalence of diabetes and correlates in an urban slum community in Nairobi, Kenya

Abstract:

Urban slum populations in Africa continue to grow faster than national populations. Health strategies that focus on non-communicable diseases (NCD) in this segment of the population are generally lacking. We determined the prevalence of diabetes and associated cardiovascular disease (CVD) risk factors correlates in Kibera, Nairobi's largest slum. Methods We conducted a population-based household survey utilising cluster sampling with probability proportional to size. Households were selected using a random walk method and consenting residents aged 18 years and above were recruited. The WHO STEPS instrument was administered. A random capillary blood sugar (RCBS) was obtained; known persons with diabetes and subjects with a RCBS >11.1 had an 8 hours fasting blood sugar (FBS) drawn. Diabetes was defined as a RCBS of ≥ 11.1 mmol/l and a FBS of ≥ 7.0 mmol/l, or a prior diagnosis or receiving diabetes drug treatment. Results Out of 2061 enrolled; 50.9% were males, mean age was 33.4 years and 87% had a minimum of primary education. Only 10.6% had ever had a blood sugar measurement. Age adjusted prevalence of diabetes was 5.3% (95% CI 4.2-6.4) and prevalence increased with age peaking at 10.5% (95% CI 6.8-14.3%) in the 45–54 year age category. Diabetes mellitus (DM) correlates were: 13.1% smoking, 74.9% alcohol consumption, 75.7% high level of physical activity; 16.3% obese and 29% overweight with higher rates in women. Among persons with diabetes the odds of obesity, elevated waist circumference and hypertension were three, two and three fold respectively compared to those without diabetes. Cardiovascular risk factors among subjects with diabetes were high and mirrored that of the entire sample; however they had a significantly higher use of tobacco. Conclusions This previously unstudied urban slum has a high prevalence of DM yet low screening rates. Key correlates include cigarette smoking and high alcohol consumption. However high levels of physical activity were also reported. Findings have important implications for NCD prevention and care. For this rapidly growing youthful urban slum population policy makers need to focus their attention on strategies that address not just communicable diseases but non communicable diseases as well.