

ABSTRACT/SUMMARY

Introduction: Inadequate water supply and sanitation adversely affects the health and socio-economic development of communities. Since 2003, more than 40 000 households in peri-urban and rural areas within eThekweni Municipality, South Africa, have been provided with urine diversion toilets, safe water and hygiene education. eThekweni Municipality have requested that these interventions be evaluated to monitor their effect on health outcomes.

Aim: The aim of the study is to describe the baseline situation in respect of sanitation, safe water and hygiene behaviour in Intervention Areas in eThekweni Municipality and compare these to Control Areas.

Methods: An observational analytic cross sectional study design was undertaken. A multi-stage sampling procedure was followed and six study areas were randomly selected. Three Intervention Areas (urine diversion toilets) were matched with three Control Areas (no urine diversion toilets). A total of 1337 households, comprising of 7219 individuals, were included in the study. A Household Questionnaire ^a and an Observational Protocol ^b was administered by fieldworkers. Data was entered onto a custom designed EpiData database, processed and analysed using SPSS version 13.

Results: The baseline characteristics revealed that Intervention and Control areas were very similar other than the provision of urine diversion toilets, safe water and hygiene education in the Intervention area. The Intervention area scored higher than the Control area (2.31 vs. 1.64) with regard to having a cleaner toilet, with no flies, no smells, having handwashing facilities and soap provided close to the toilet. Some of the collected data from questionnaire responses were not consistent with the fieldworkers observations. It was reported that 642 households in the Control and 621 in the Intervention areas washed their hands with soap, whilst only 396 households in the Control and 309 in the Intervention areas were observed to have washed their hands with soap.

^a A Household Questionnaire representing 88 data fields, which includes demographics, socio-economic variables, types of sanitation facilities provided, source of water and hygiene behaviours.

^b An Observational Protocol containing 30 items on a checklist relating to hand washing facilities, the use of soap, UD toilet or other observed sanitation facility, its appearance, cleanliness, usage, smell, the presence of flies and if other types of sanitation facilities were in use.

Conclusion: Households in the Control area are at a greater risk of developing diarrhoeal and other related diseases. The provision of safe water, urine diversion toilets and hygiene education in the Intervention area has proved to be successful.

Recommendations: eThekweni municipality must expand the package of services ^c to the Control areas. Sustainable hygiene education programmes must continue to be implemented and be evaluated over time.

Plate 1: Inside view of the UD Toilet

Plate 2: Ground tank providing 200 litres free water

Plate 3: Hygiene education material

Plate 4: External rear view of the UD toilet

^c Package of services to include safe water, appropriate sanitation technology and hygiene education.