

II. EXECUTIVE SUMMARY/ABSTRACT

Background

Kenya is one of the developing countries in the sub-Saharan Africa. The life expectancy currently stands at between 47 to 55 years although these figures may have deteriorated due to the effects of HIV/AIDs. The ten leading causes of outpatient morbidity in Kenya include malaria, respiratory, skin, diarrhoeal diseases, HIV/AIDS, Intestinal worms, Accidents, Pneumonia, Urinary Tract Infection and Eye Infection.¹

Every year there are over 2.2 million diarrhoeal deaths that are reported worldwide attributable to unsafe water, sanitation and hygiene with most of these deaths being among children under 5 years. As a result of lack access to adequate safe diarrhoeal diseases alone amount to approximately 4.1% of the total DALY global burden of disease and are responsible for 1.8million deaths every year (WHO 2004).

In low income countries more than 1 billion people lack access to clean safe water and/or improved water sources resulting to 4 billion cases of diarrhoea each year. The lack of access to safe drinking water poses a major challenge resulting to unnecessary morbidity and mortality due to water borne diseases. Mostly affected are children under five years as diarrhoea coupled with other childhood diseases pose great threat to this vulnerable cohort as well as their families due to poor living conditions.²

MOH reports show that 80% of hospital attendance in Kenya is due to preventable diseases with 50% of these diseases being related to water, hygiene and sanitation.¹¹ In Kenya every child under five years has an average of 3 diarrhoeal episodes every year, placing diarrhoea among this age group as the 3rd leading cause of morbidity.³ Around the country diarrhoea causes 16% of deaths among children under 5 years every year and in many of the rural health facilities, diarrhoea is rated number 3 leading cause of outpatient attendance.

In Kenya, in 1990 45% of both urban and rural Kenyan population had access to safe water, although this has slightly improved to 63% in 2004. Access to safe drinking water can be defined as use of improved source of water that includes piped water, public or community based tap water, protected well or borehole or spring and rain water collection/harvesting. However, there are huge disparities between the urban and rural populations with 90.8% of urban households using any of the improved sources of drinking water and only 53.8% of rural households.² In some areas, these figures may reduce drastically especially areas of the informal settlement in urban areas like in the slums.

Many studies have shown that strategies involving provision of piped water, boreholes reduce drastically water borne diseases and especially diarrhoea.⁴ However, this may not be a practical intervention in countries that do not have the financial capacity to improve the existing overstretched water supply infrastructure. Therefore appropriate cost-effective methods are sort to reduce and/or minimize the cases due to water borne diseases and especially diarrhoeal diseases e.g. promotion of point of use water disinfection. Moreover, several studies in developing countries have shown that point-of-use household based disinfections of drinking water with sodium hypochlorite or the new flocculant water disinfectant reduces the incidence of diarrhoea by 20-48%.⁵

According to KDHS 2008, less than 45% Kenyan households use at least 1 water treatment method for their drinking water. Preferred water treatment method by many households is boiling in 29% of households while 18% use water treatment chemicals e.g. chlorine. Further water treatment using appropriate methods is more common in urban households (57%) than the rural households (40%).²