



# SNV

## Policy Brief

### Improving Sanitation in Elgeyo Marakwet County: Recommendations from Research



**In Kenya, diarrhoeal diseases are among the leading causes of morbidity and mortality in children under five, attributed to inadequate safe water, sanitation and hygiene. Poor sanitation may be associated with a number of infectious and nutritional outcomes, and these outcomes also cause a heavy burden of disease.**

In Elgeyo Marakwet County, access to clean water and appropriate sanitation remains a challenge to a significant proportion of the population. Studies have found that in 2014,<sup>1</sup> only about a quarter (26%) of the county's population had access to improved sanitation services and that 33% and 19% used unimproved sources and open defecation respectively.

This brief highlights the key findings from a recent study entitled *Understanding the Effects of Poor Sanitation on Public Health, the Environment and Well-being* commissioned by SNV Netherlands Development Organisation (SNV) as part of the Voice for Change Partnership (V4CP) programme. The programme advocates for county governments to address water, sanitation and hygiene (WASH) issues affecting their communities. This brief presents recommended measures that the county government and partners can take to improve the sanitation and health outcomes for the population in Elgeyo Marakwet County.

The V4CP programme is implemented by SNV in collaboration with the Institute of Economic Affairs (IEA). The research was conducted by the Centre for Population Health Research & Management (CPHRM).

#### Key recommendations for Elgeyo Marakwet County government and partners

- Set up initiatives to mobilise the community to build improved toilets to reduce the risk of water and environmental contamination
- Implement activities to strengthen public awareness and education about sanitation and hygiene
- Take action to ensure that health care providers monitor and closely observe children presenting with diarrhoea
- Ensure drinking water is treated and safe for human consumption

1 Ministry of Health and WSP. 2014. County Sanitation Profiles – Elgeyo Marakwet County

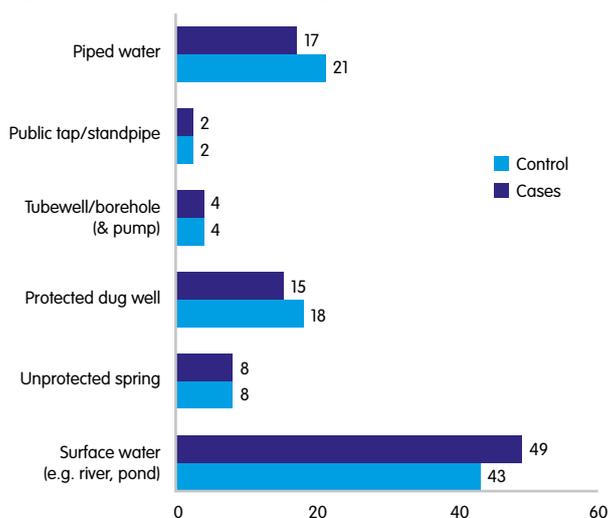
## Key Finding 1: Poor sanitation and untreated water sources contribute to diarrhoea in children in the county

The research found that diarrhoeal diseases are a leading cause of illness for children aged five years and under in Elgeyo Marakwet (Figure 1), second only to upper respiratory tract infections. The results suggest that there may be a link between the source, storage and treatment before drinking of household water and the incidence of the child having diarrhoea. Firstly, more of the households in the control group (where the child did not have diarrhoea and had not been treated for it in the two weeks before the survey) were using water from improved, protected sources than in case households.

In addition, more case households also store water unsafely, with 39% reporting that they store drinking water in an open container compared to 32% of the control households. Significantly, about 71% of the case households reported that they did not treat the water before drinking, compared to 56% of those in the control group. About 24% of the households in the case group reported boiling their water before drinking, compared to 38% of the control group.

The study also found that public water points were contaminated with a high level of *E. coli* and the water was therefore unfit for human consumption if untreated. GIS mapping of the location of the cases and controls in relation to water sources, open defecation sites and pit latrines suggests there may also be a link between the proximity to open defecation sites and the likelihood of a child having diarrhoea.

Figure 1: Main sources of drinking water for study sample (%)



## Key Finding 2: Many households are exposed to sanitation-related diseases

The research found that more case households were, in general, exposed to higher risk of sanitation-related diseases than in the control group. According to the findings, in the six months before the survey, slightly more case households had a family member who was treated for sanitation-related illness than the control group. For instance, 16.5% of the case households had a member treated for typhoid, compared to 13% in control. Similar differences were seen for skin and eye infections (5% compared to 4% in the control group) and diarrhoea or stomach ache (four households compared to one household in the control group). This suggests that case households are more at risk of illnesses related to sanitation and that children in these households are at aggravated risk of diarrhoea and related negative health outcomes.

The results also showed that children in the case group were significantly more affected by previous recurrent diarrhoea compared to those in the control group: 79% had suffered diarrhoea in the two weeks prior to the study compared to only 10% in the control group. In addition, although the case group had older children (73% aged 1 to 4), they had a lower median weight at 10 kg compared to the control group at 11 kg, indicating likelihood of poor nutrition. Although mixed feeding was found to be common in both groups, more children in the control group (34%) were on exclusive breastfeeding than in the case group. This suggests that the children in the case group were more exposed to risky feeding practices, which can contribute to increased risk of diarrhoea.

## Research design and approach

This research study was conducted in February and March 2018. It used a mixed methods design that comprised a case-control quantitative study, qualitative interviews in the community (key informant interviews and focus group discussions), observation, review of health facility data on under-five morbidity and mortality, and water sampling and testing.

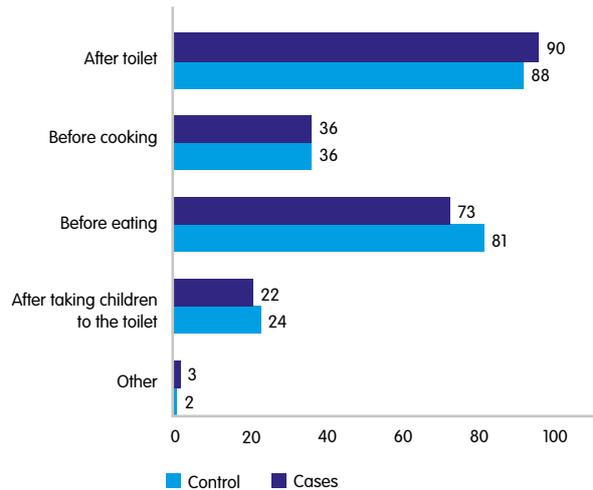
Cases were children under five years of age who presented to the participating health facilities with diarrhoea (as defined by the health worker, with a minimum requirement of three or more loose or watery stools in the previous 24 hours). Controls were children in the same age range, who reported with any other infection or trauma but without diarrhoea.

### Key Finding 3: Exposure to sanitation messages and caregivers' personal hygiene habits affect the likelihood of a child having diarrhoea

The study findings showed that more respondents in the control group (58%) had been exposed to messages on sanitation and hygiene than those in the case group (54%). Notably, more respondents in the control group (42%) had heard such messages when visiting a health facility compared to those in the case group (30%), suggesting a possible link between exposure to messages and information on sanitation and hygiene and the child having diarrhoea.

Caregivers' sanitation and hygiene habits were also found to pose a greater risk of spreading contamination among the case households than in control households (Figure 2). For instance, more respondents in the case households (11%) did not wash hands after using the toilet than in control households (9%). A significantly smaller proportion of cases (73%) than controls (81%) washed their hands before eating (Chi-Square  $P=0.050$ ). In addition, more respondents in the case households used only water (45.6%) than in the control households (38.3%), meaning they were exposed to much higher chances of contamination by faeces.

Figure 2: Instances caregiver washed hands in last 24 hours



Hygiene promotion activity; Handwashing demonstration in schools by use of an improved handwashing facility (Tippy Tap) at five critical times



Community members taking lead in social mapping during a CLTS triggering session in Marakwet East sub-county

## Policy Options: What can the county government and partners do to address poor sanitation in Elgeyo Marakwet?

To address these challenges and contribute to the improvement of the health and well-being of children in the county, the Elgeyo Marakwet County government and partners implementing sanitation projects in the county can take the following actions:

- **Set up initiatives to mobilise the community to build improved toilets to reduce the risk of water and environmental contamination through poorly disposed faeces and open defecation.** As shown in the findings, case households - with a child with diarrhoea - were likely to be poorer than those in the control group. In the focus group discussions (FGDs), the participants said that the community builds temporary toilets because of the perceived cost of building an improved one. Increasing the coverage of improved sanitation facilities in the community will reduce the risk of contamination and the resultant negative outcomes for children. Such an initiative requires that the county government increases the allocation to sanitation services in the annual budget, adopts the right policies and takes steps to mobilise more resources from the civil society partners active in the county.
- **Implement activities to strengthen public awareness and education about sanitation and hygiene and the risk posed by poor sanitation to the health and well-being of young children.** The results demonstrated that exposure to messages on sanitation and hygiene could help reduce the incidence of childhood diarrhoea, as more respondents in the control group (58%) had been exposed to such messages than those in the case group. Such public education and awareness initiatives should address personal hygiene habits and especially the need to wash hands with soap after the toilet in order to reduce contamination.
- **Address the high incidence of mixed feeding for children younger than six months, who should still be on exclusive breastfeeding.** The results show that more children in the control group were on exclusive breastfeeding than in the case group. This suggests that mothers of young children may not be getting the right information regarding child nutrition. The county government and its partners need to address this.
- **Take action to ensure that health care providers monitor and closely observe children presenting with diarrhoea and that their families are linked with community health workers for monitoring and support at home to address sanitation and prevent recurrent episodes.** The results show that the children in the case group were significantly affected by recurrent diarrhoea compared to those in the control group.
- **Ensure drinking water is treated and safe for human consumption.** The county government needs to develop policies and guidelines to ensure that public water sources are treated appropriately so the water is fit for human consumption. The results of this study suggest there may be a link between the source, household storage and treatment of water and the child having diarrhoea. In addition, the public water points tested in this study were contaminated with a high presence of *E. coli* and thus are unfit for human consumption if untreated. To address this situation, the county government needs to ensure all public drinking water is treated and that all faecal sludge is disposed of safely. In addition, the government should consider expanding the sewerage system in densely populated areas.

For more information on these findings, see research report: *Understanding the Effects of Poor Sanitation on Public Health, the Environment and Well-being. Elgeyo Marakwet County - Report of research findings. 2018.* Published by the V4CP programme.

### Further information

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