

## Foodborne Disease in Kenya: The Case for Greater Public Investment

### POLICY BRIEF | MARCH 2020

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### COSTS OF FOODBORNE DISEASE

Access to safe food is a fundamental right in the constitution of Kenya. Despite this, foodborne disease (FBD) is a major problem in Kenya increasing personal and government health costs, reducing economic activity when people fall ill, and increasing barriers to agricultural trade. Compared to these costs, national and county investments in food safety are low.

#### High costs, low budgets

	Cost of FBD (billion Ksh/yr)	Food safety budget (billion Ksh/yr)	Times cost exceeds budget
National	96	12.5	7.7
Murang'a	1.6	58	27
Laikipia	0.87	61	14
Nakuru	4.6	156	29
Nairobi	21.8	74	294
Nyandarua	2.0	110	18

### ACTIONS COUNTIES AND NATIONAL GOVERNMENT CAN TAKE

- **PROMOTE SANITATION AND HYGIENE:** Provide or promote improved sanitation and hand-washing facilities with available soap to households and all workers who handle food.
- **INFORM FARMERS:** Teach farmers about the risks of using unclean water for irrigation and untreated manure for fertilizer.
- **PROVIDE TESTING:** Offer testing for water bodies used for irrigation.
- **EDUCATE CITIZENS:** Inform consumers on best practices for food safety. Materials from the WHO or Ministry of Health can be displayed in health facilities, schools and other public places.

## **FOODBORNE DISEASE**

Diarrheal disease is the most significant component of FDB. The burden of diarrheal disease falls disproportionately on children and is linked to growth stunting, with long-term negative effects. Increased investments in reducing FBD— particularly in products consumed by young children— have the potential to pay long-term dividends to both the economy and public health in Kenya.

### *Transmission*

Diarrheal disease is spread by consuming microorganisms found in the fecal matter of infected people or animals. Food can be contaminated by the farmer who grows it, vendors who buy and sell it, or consumers who prepare and store it. Contamination can occur through soil or irrigation water, exposure to animal feces or contact with individuals not practicing good hygiene.

### *Burden on children under five*

Children under 5 make up 9% of the global population but 38% of cases of foodborne illness. Repeated diarrheal episodes are linked to stunting, which reduces children's cognitive capacity as well as physical growth. The effects of childhood stunting are largely irreversible: reducing stunting therefore results in long-term benefits to quality of life and economic productivity.

The risk is greatest for younger children, particularly those under two years. Exclusive breastfeeding before 6 months is the most effective way to reduce risk of foodborne illness. Some of the most nutritious foods, such as milk and fruits, are linked to a higher risk of foodborne illness, but consuming these foods is important for children's development and should be encouraged. Improvements in the safety for these foods can have long-term benefits.

### *Costs to Kenya*

Household survey data shows that across counties 11-16% of interviewed households report one or more children under 5 having diarrhea in the past two weeks. Using WHO estimates, we find that consuming unsafe food causes 29% of diarrheal disease in sub-Saharan Africa, and that diarrheal disease transmitted through food causes 1,328 child deaths per year in Kenya. Overall, foodborne disease accounts for a total loss of 537,000 disability adjusted life-years (DALYs) or approximately 1.1% of national GDP.

## **PUBLIC INVESTMENTS & FOOD SAFETY**

Kenya's economy is growing as citizens move from traditional village-based production systems to urban centres, and increasingly consume fresh food transported over greater distances, increasing the risks of contamination and foodborne illness. Research shows that national levels of foodborne illness among middle-income countries are associated with public food safety management capacity. Government investment to improve this capacity can improve both health and economic outcomes for Kenyans.