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## Navigating nourishment: Unveiling disparities between rural and urban food environments—a case study in Kenya

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### Abstract

Non-communicable diseases (NCDs) are increasing in both rural and poor urban areas, although urban areas are more affected. In urban areas, the greatest burden is borne by informal settlements, where one in five people are exposed to NCD risk factors due to unhealthy food environments. In rural areas, diets are increasingly transitioning toward more processed foods due to changing food environments. This study aimed to characterise the food environment in vulnerable urban and rural areas in Kenya. This will help provide context-specific evidence of the food environment that is useful for developing policies relevant for advancing safe and healthy diets. This study was conducted at two sites, Viwandani in Nairobi, representing the vulnerable urban, and Kiima Kiu in Makueni, representing the rural. GPS coordinates were collected from all vendors in the study area between October and December 2023. Vendors were categorised into 14 types, and the foods sold per vendor were listed and assigned to different food groups based on the 10 food groups scale used for the Minimum Dietary Diversity Score for Women (MDD-W) and unhealthy food groups such as snacks, sweetened beverages, oil and fats. Kiosks were the leading vendor type in both areas, followed closely by tabletop vendors (urban: kiosk, 38.5%; tabletop, 27.6%; rural: kiosk, 26.9%; tabletop, 24.47%). Kiosks had the widest diversity of food groups sold both in rural and urban areas. However, they also sold the greatest number of unhealthy foods – sugar-sweetened beverages and processed snacks. The percentage of vendors selling sugar-sweetened beverages was greater in rural areas (55.1%) than in urban areas (29.5%). Tabletop had the highest diversity of vegetables and fruits. Rural communities have higher exposure to ultra-processed foods, such as sugar-sweetened beverages and snacks, which increases their risk of developing NCDs. To support healthy eating, interventions promoting a healthy food environment need to be implemented in both rural and urban vulnerable populations.

**Keywords:** Food environments, food groups, food vendors, healthy foods