Market to Mouth: An observational study on the influence of milk product safety and household food hygiene on indicator and pathogen contamination of infant food in peri-urban Kisumu

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Cow’s milk as a weaning food

- Commonly fed to very young infants in Kenya
- Most contaminated weaning food observed in peri-urban Kisumu (Tsai et al., 2019, *Int J Environ Res Public Health*)
- 68% of Market to Mouth caregivers who fed milk to infant used UHT milk, 23% fresh pasteurized, 9% unpackaged

**At what point does milk fed to infants become contaminated?**

**Methods**

- Analyze 187 paired samples: food provided to infants at 8 months, vendor milk used to prepare that food
- Culture + PCR confirmation
- Compare fecal indicator & pathogen contamination:
  - By type (unpackaged, pasteurized, UHT) at purchase
  - By type in infant food
  - At purchase vs. in infant food
Differences in contamination by milk type at purchase did not persist in infant food

**Vendor milk**

**Infant food**

*A bacteria type identified as EHEC-0157 through culture methods but not confirmed as such via PCR.*
Survival probability of bacteria from market to mouth was highest for processed milk.

Pathogen contamination in infant food mostly introduced through household handling.

Concordance in *S. Sonnei* detection

- Probability same organism detected in infant food as vendor milk
- Survival probability of bacteria from market to mouth was highest for processed milk

- UHT, Pasteurized, Unpackaged