

Maternal and Child Health Outcome Improvements in Kisii, Kenya: A Difference-in-Difference Analysis

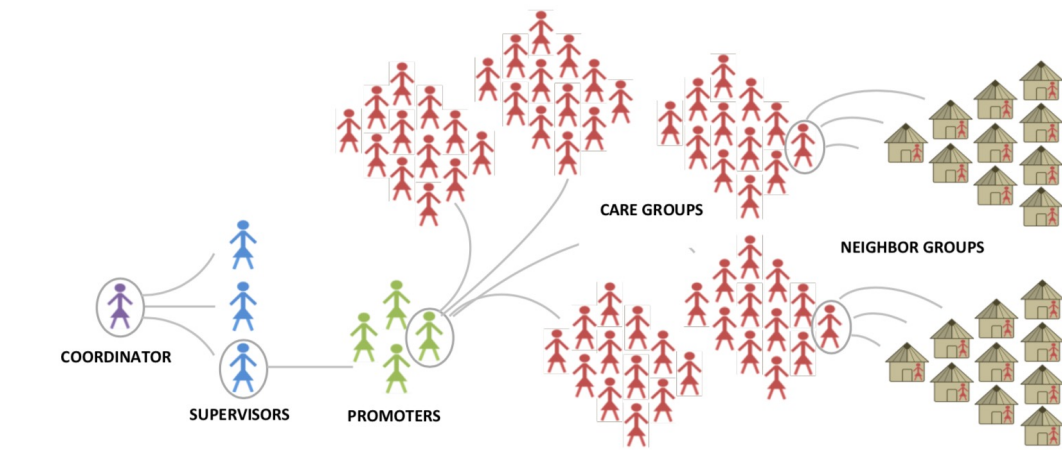
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BACKGROUND

- Kisii County, located in southwestern Kenya, faces significant challenges in maternal and child health.
- Mortality of children under age 5 in Kisii County is 74 deaths per 1,000 live births vs. 41.9 deaths per 1,000 nationally.
- Maternal Mortality Ratio in Kisii County is 500 deaths per 100,000 births vs. 342 deaths per 100,000 live births nationally.
- Factors contributing to these challenges include limited access to healthcare facilities, inadequate antenatal care, and cultural practices affecting maternal and child health outcomes.
- The Curamericas Global - Kisii Konya Oroiboro Project (KIKOP) implemented a comprehensive program (2018-2021) to reduce maternal and child mortality, using the Extended Community-Based, Impact-Oriented (CBIO+) approach.

CBIO+ approach strategies:

Care Groups



Each Community Group Volunteer (CGV) leads 10-15 pregnant women and mothers of children U2 through regular, twice-monthly lessons where they learn and try new health behaviors (e.g., hand washing, breastfeeding, etc.).

Routine Home Visits

Community Health Volunteers visit homes of pregnant women and mothers of children under age 2 to check on the health of mother and child, assess health knowledge and behavior, and provide support.

Health Facility Improvements

Improvements to infrastructure, medical supplies, and provider attitudes and behaviors; 24/7 health facility accessibility

Community Mobilization

Village Health Committees share data and educate community leaders on maternal and child health issues.



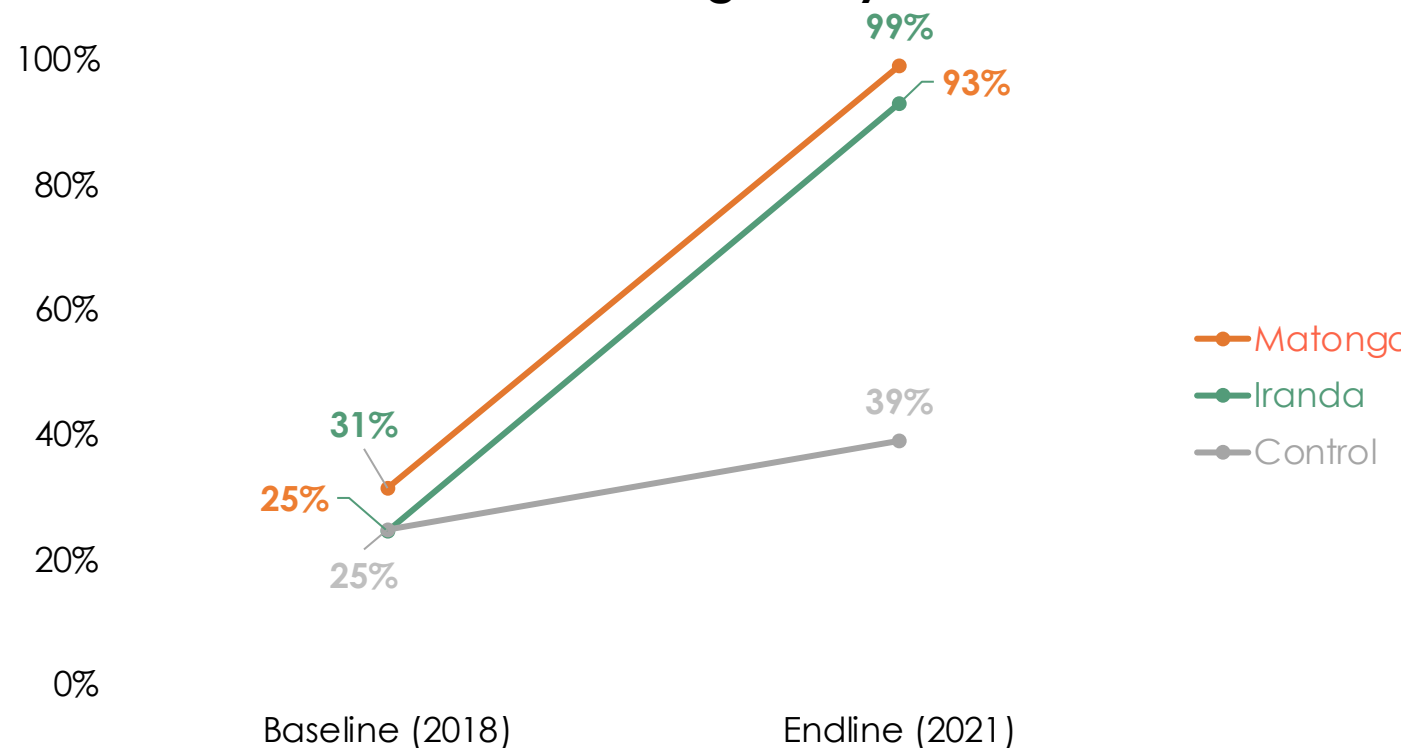
METHODOLOGY

- Knowledge, practice and coverage (KPC) surveys were executed among a total sample of 300 mothers with at least one child under age two, at baseline and endline in 2018 and 2021 respectively, Matongo and Iranda, (program areas), and Mosocho Market (control area).
- The KPC survey was created in 2018 using standard indicators provided by the United States Agency for International Development (USAID) Maternal and Child Health Integrated Program (MCHIP).
- Survey contains 10 modules:
 - mother's demographic data;
 - mother's obstetric antecedents;
 - pregnant women care; birth and newborn care;
 - postpartum care and attention to newborn;
 - maternal lactation, nutrition, and micronutrients;
 - water and sanitation;
 - vaccination;
 - childhood illnesses;
 - anthropometry.
- A difference-in-difference (DiD) analysis was conducted to assess KIKOP intervention success.

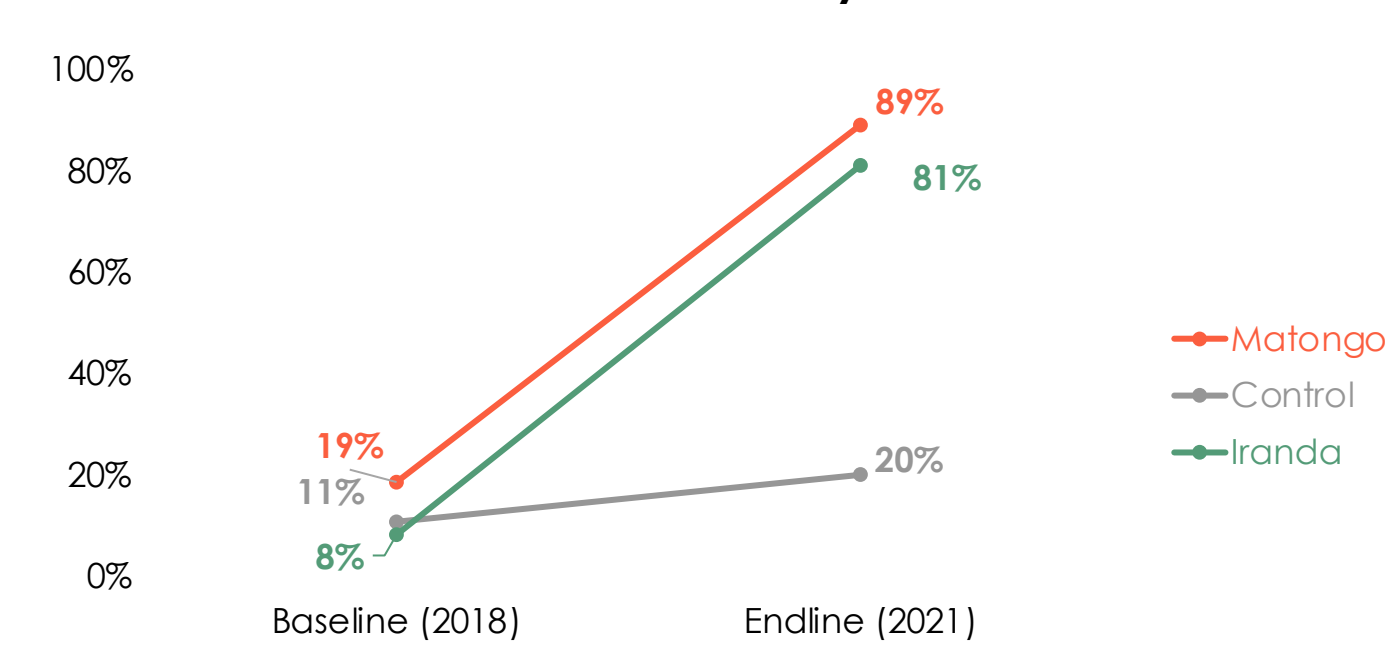
FINDINGS

- Significant (over 30% increase) impact in both Matongo and Iranda was seen in maternal knowledge of:
 - Pregnancy danger signs
 - Delivery danger signs
 - Postpartum danger signs
 - Newborn danger signs

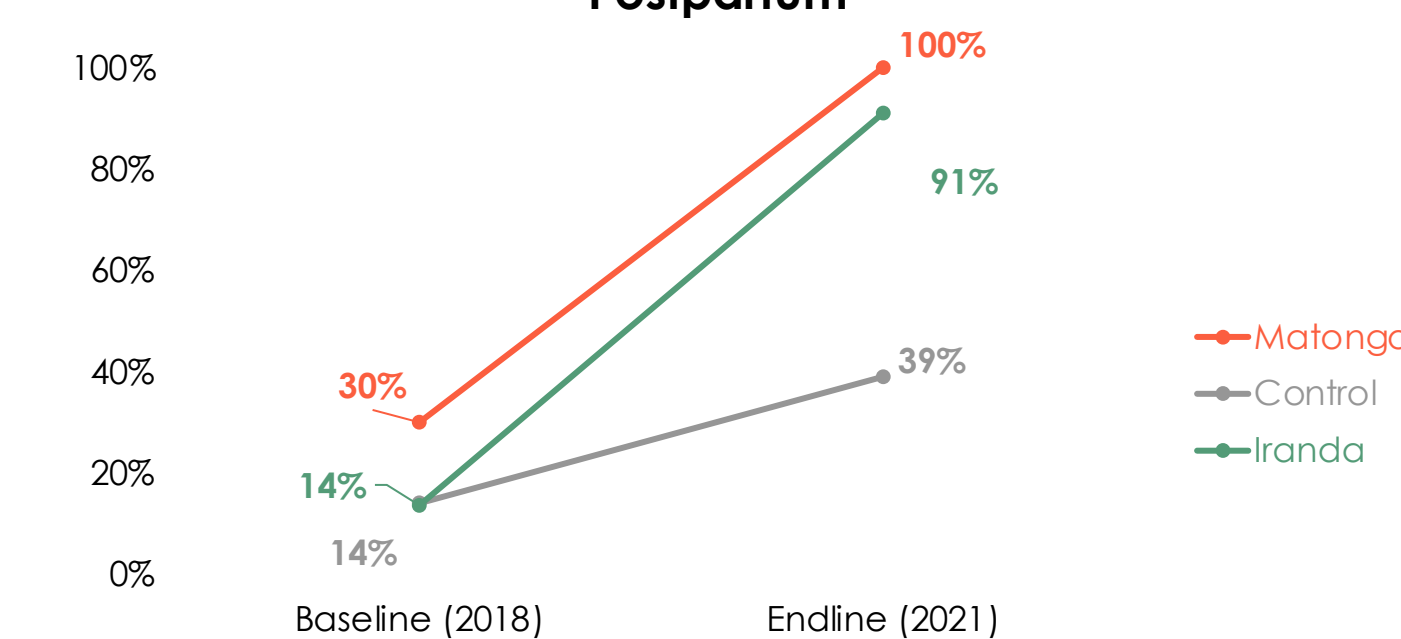
% of Women Who Knew 3+ Danger Signs During Pregnancy



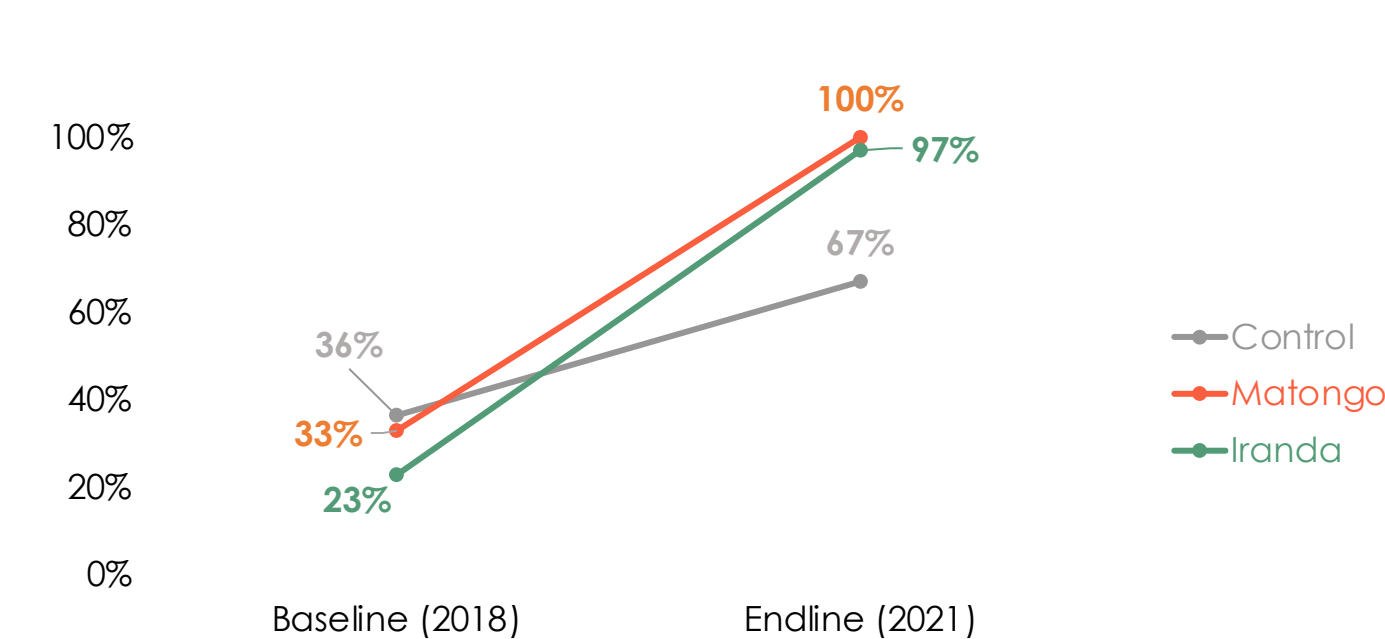
% of Women Who Knew 3+ Danger Signs During Delivery



% of Women Who Knew 3+ Danger Signs for Postpartum



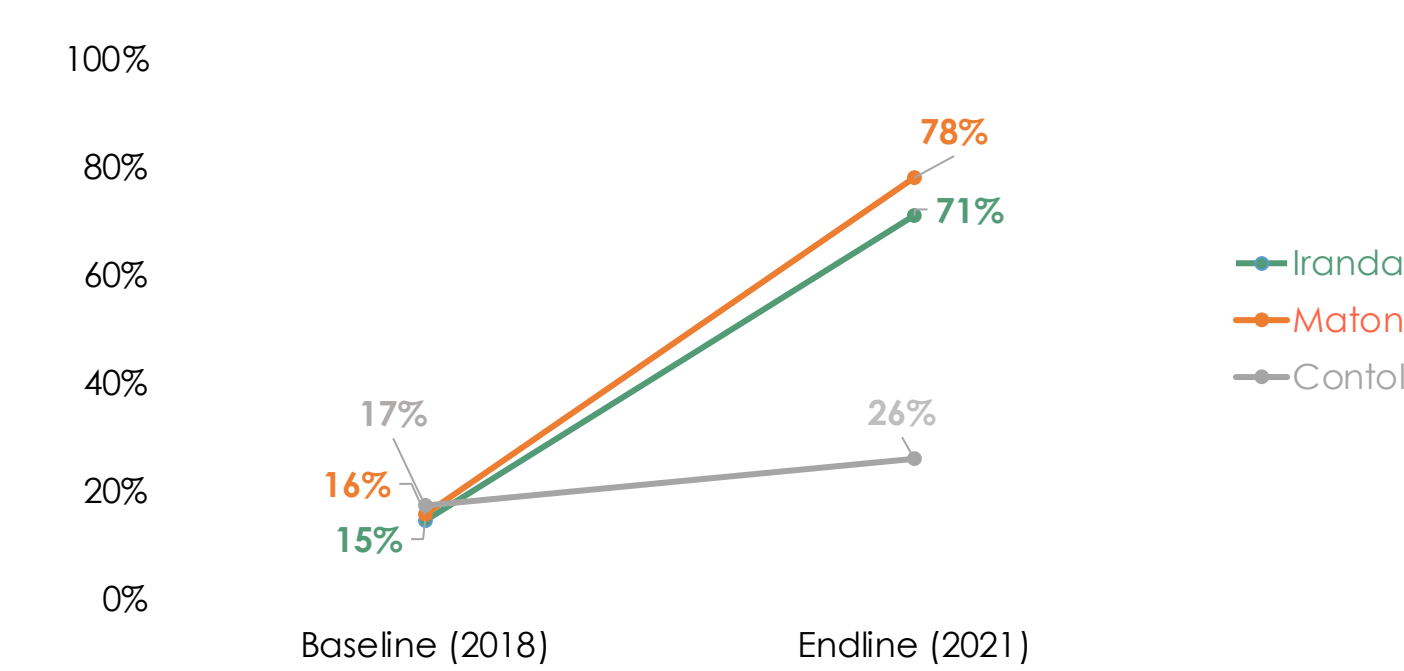
% of Women Who Knew 3+ Danger Signs for Newborn



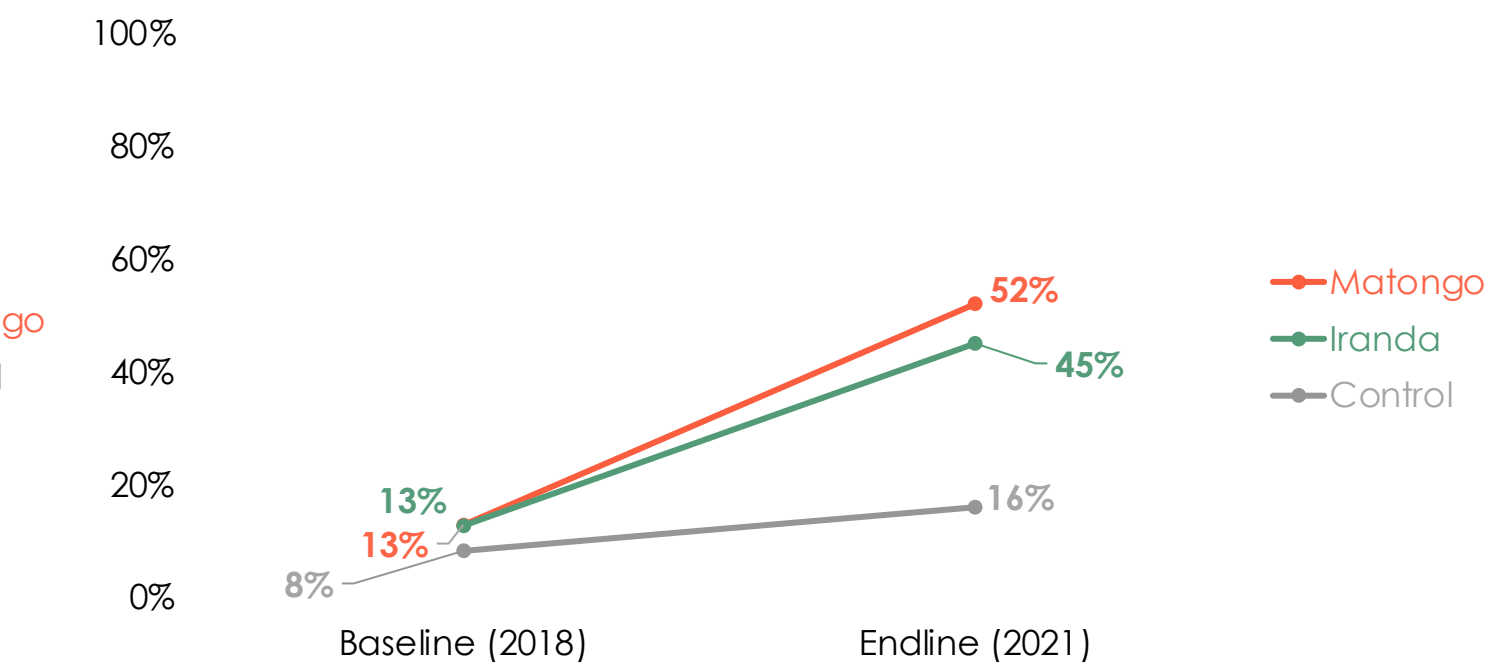
FINDINGS

- Significant impact (over 30% increase) in both Matongo and Iranda was seen in the proportion of women with:
 - a birth plan which included 3 of the following components
 - health facility where the mother plans to deliver
 - means of transportation to the health facility;
 - how the family will secure the transportation money;
 - who will accompany the mother to the health facility;
 - who will care for other child(ren) during her absence.
 - point-of-use treatment on drinking and cooking water
 - by boiling, chlorination, SODIS, or regularly filtering
 - open defecation free (ODF) households
 - including 1) having no open defecation site; 2) having a basic latrine facility with drop hole cover to prevent flies; 3) having a hand washing station
 - minimum dietary diversity for their children
 - containing: 1) milk products; 2) grains, roots, tubers; 3) vitamin A rich foods; 4) other fruits and vegetables; 5) eggs; 6) meat, poultry, fish, shellfish; 7) legumes, nuts.

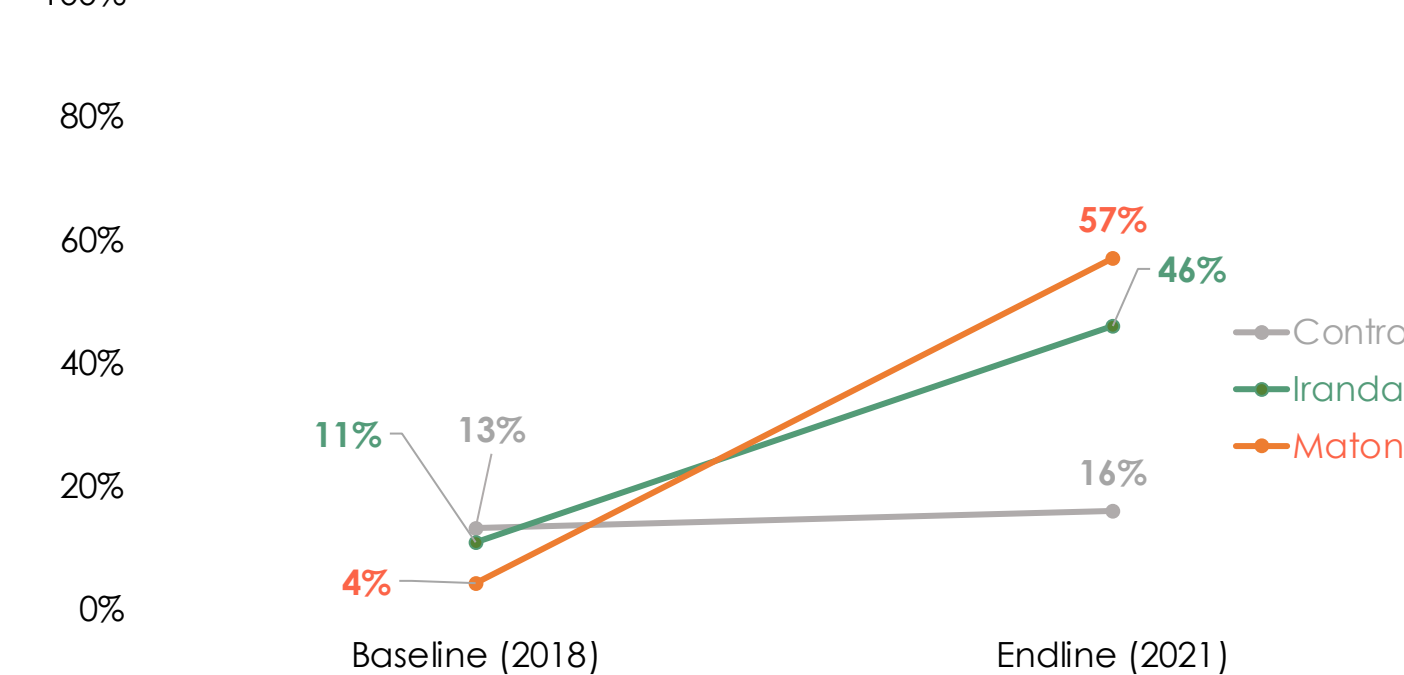
% of Mothers with Birth Plan Containing 3 or More Components



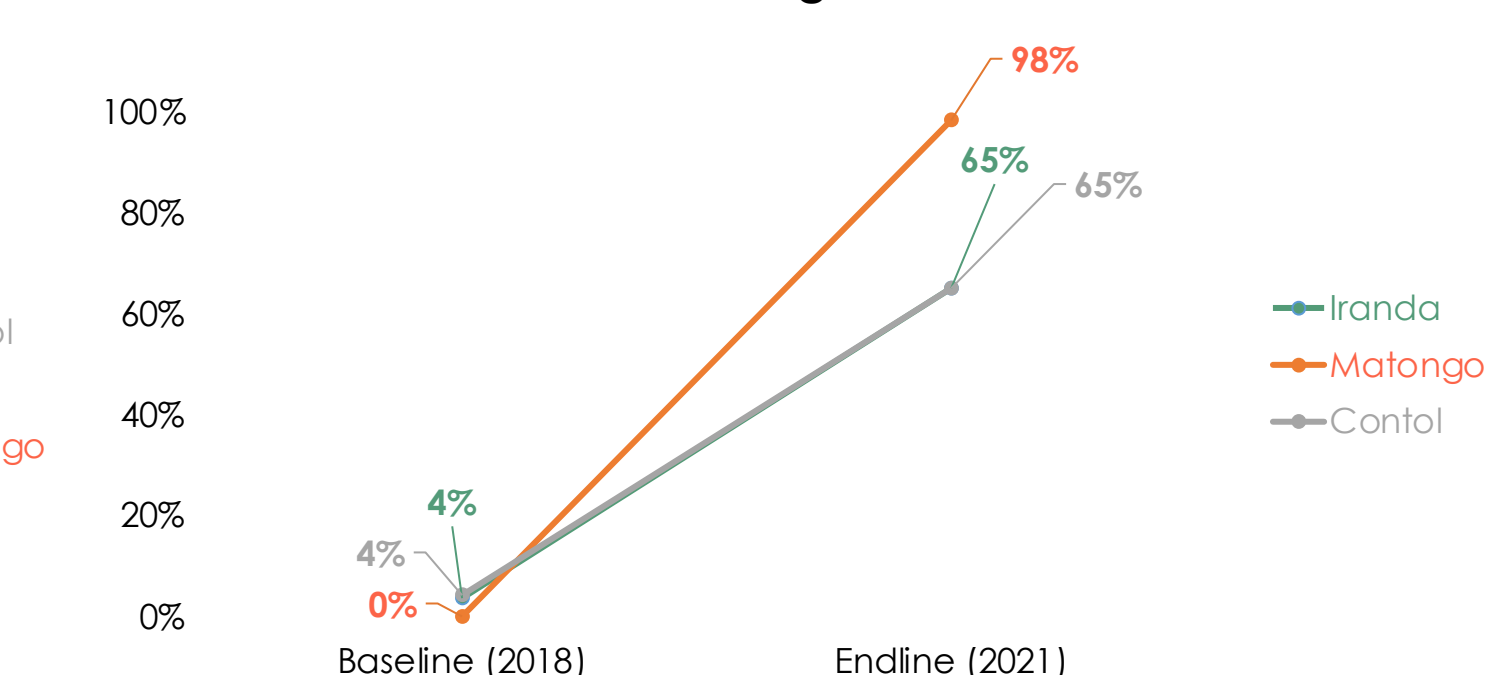
% of Women Who reported Proper Point-of-Use Water



% of Women Who Reported Open Defecation Free Households



% of Mothers Who Met Minimum Dietary Diversity for Children Aged 6-23 months



DISCUSSION

- While there was an overall positive impact across various maternal and child health indicators through KIKOP's program, more robust intervention in providing respectful and culturally appropriate care during delivery, family planning uptake, and exclusive breastfeeding is needed.
- The CBIO+ approach with active involvement of communities, including women, caregivers, community health volunteers, and local leaders, proves to be critical in effectively disseminating health information, promoting positive behaviors, and overcoming barriers to healthcare access, and sustainably improving maternal and child health in Kisii County.

ACKNOWLEDGEMENTS & REFERENCES