

# Influence of community health workers on uptake of hormonal implants and the intrauterine device in Kenya: An ecological quantification using zero inflated models.

## ABSTRACT

### Background

Pooled evidence suggests that community health workers may improve uptake of implants and the intrauterine device in resource poor settings. However, differential among counties may adversely affect their motivation. Understanding regional how this affects uptake of contraception is important for policy makers.

### Objectives

To compare uptake of implants and copper IUD between regions with active vs inactive community health workers between 2018-2019 in Kenya.

### Methods

This was an analysis of District Health Information Software (DHIS) data. We extracted data on the uptake of hormonal implants and the intrauterine device from 2800 health centers across Kenya. Data on the status of community health workers in all regions was extracted from a ministry of health up-to date database of all community health units in Kenya. To test the effect of community unit functional status on uptake of the two methods, we used zero inflated negative binomial regression (ZINB) and zero inflated Poisson (ZIP) regression models. All models were on the additive scale.

### Results

A total of 1185 health centers were included for analysis. The mean number monthly insertions in health centers was 5.05 for IUDs and 11.65 for hormonal implants. In regions where community health workers were active (functional), women were 61% more likely to take up hormonal implants compared to other regions, even after adjusting for density of health facilities and health workers (RR=1.61, 95% CI=1.52 – 1.69). However, we did not find a similar effect for the copper intrauterine device (RR=0.98, 95% CI=0.88 - 1.52).

### Conclusion

Uptake of the hormonal implant was higher in regions with active community health workers compared to regions with non-functional community health workers. However, there was no effect on the intrauterine device. Additional research is needed to understand the role of community health workers in promoting LARCs and especially the intrauterine device.

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