

# Impact of a programme of universal home visits on early child health: a stepped wedge cluster randomised controlled trial in Bauchi State, Nigeria

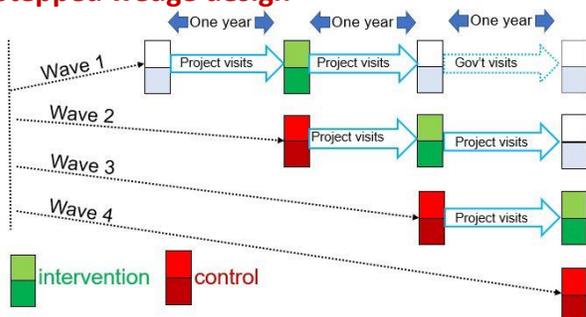
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## Background

Nigeria is the second biggest contributor to global child mortality. Infectious and vaccine-preventable diseases continue as major killers.

A [trial of universal home visits](#) to pregnant women and their spouses aimed to improve maternal and child health by stimulating action at household level. Analysis after one year of intervention documented [improved maternal health outcomes](#). We focus here on the impact on childhood diarrhoea and immunisation.

## Stepped wedge design



Eight wards randomised into 4 waves. Intervention implemented at one year intervals. Baseline at the start of each wave served as control for the previous wave.

## Participants

Intervention: 1796 children 12-18 m old born to mothers visited during the first year of visits in waves 1-3

Control: 5109 children 12-18 m old born before the intervention in waves 2-4

## Intervention

Female and male [home visitors visited](#) all pregnant women and their spouses every two months. They presented evidence about prevention and management of diarrhoea, and the benefits of child immunisation.



## Outcomes

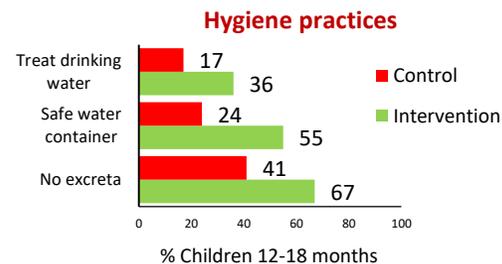
- Prevalence of diarrhoea
- Management of diarrhoea
- Household hygiene practices
- Immunisation status of children
- Mothers' knowledge and beliefs

## Statistical testing

We used Generalized Linear Mixed Modelling to test the significance of differences between intervention and control children, adjusting for clustering and baseline differences

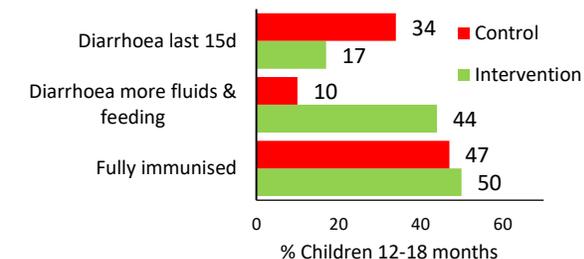
## Results

- Less diarrhoea last 15 d (OR 0.30, 95% CI 0.18 – 0.51).
- More children with diarrhoea given extra fluids & continued feeding (OR 32.01, 95% CI 7.53 – 136.10).
- More children fully immunised (OR 3.80 95% CI 1.39 – 10.39)



- Poor hygiene causes diarrhoea (OR 3.76 95% CI 1.22 11.56)
- Give extra fluids and continue feeding during diarrhoea (OR 15.10, 95% CI 5.52 – 41.31)
- Do not give medicine to stop diarrhoea (OR 16.46, 95% CI 6.24 – 44.39).

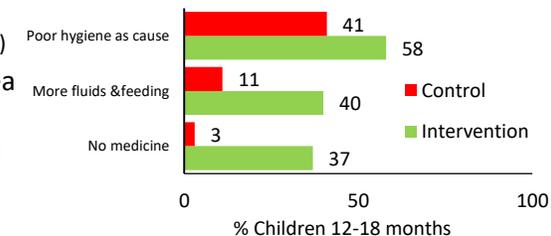
## Child health outcomes



## Improved hygiene practices:

- Treated drinking water (OR 8.37, 95% CI 3.57 – 19.65)
- Safe water container (OR 6.81 95% CI 3.64 – 12.74)
- No garbage, excreta (OR 4.27 95% CI 2.05 – 8.88)

## Mothers' beliefs about diarrhoea



## Conclusion

The home visits stimulated household actions that improved child health outcomes. This is relevant for other settings with poor access to quality health services.

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