

## Reducing Diarrhea in U5 children through combination of Interventions in Diarrhea Hotspot Areas: A Clustered randomized controlled trial in South Western Ethiopia.

### BURDEN OF CHILDHOOD DIARRHEA

It has been reported that there is a high burden of Childhood diarrhea (CHD) in Southwest Ethiopia, with significant variations between districts. About 90% of CHD has been linked to poor water, sanitation, and hygiene provision. Child hood diarrhea can be prevented with simple but effective mechanisms such as hand washing and treatment of water in homes. However, data show high burden of child mortality and morbidity because of CHD especially in rural parts of Ethiopia.

### METHODS

This study aimed to evaluate the effectiveness of 3 intervention packages:

- 1) Hand washing with soap at critical times only,
- 2) Home-based water treatment only, and
- 3) Combination of hand washing with soap at critical times and home-based water treatment in reducing CHD.

Community-based randomized control trial with factorial design was conducted in southwestern Ethiopia. Seven hundred and twenty households were equally randomized into 3 intervention groups and 1 control group with no any intervention. Data was collected from February to July 2020. Intention-to-treat analysis was used to compare incidence of CHD in the intervention and control groups.

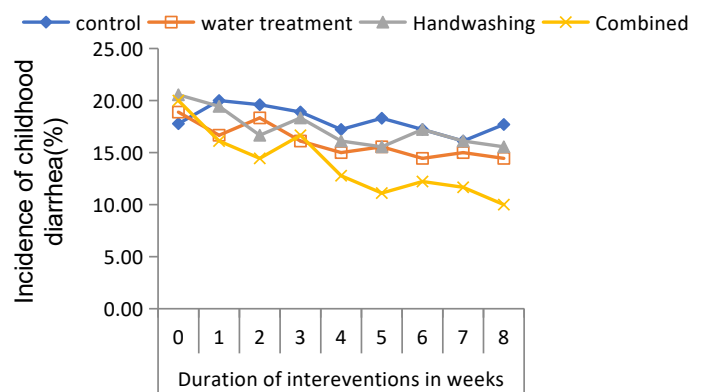
### ACKNOWLEDGMENT

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### KEY FINDINGS

The incidence of CHD significantly decreased in the 3 intervention groups, but increased in the control group. The reduction in CHD was highest (66%) among the third group that received combination of interventions.

Figure 1. Incidence of childhood diarrhea in intervention and control groups.



### PRIORITY RECOMMENDATION

This study indicated that a single and combined interventions of hand washing and home-based water treatment reduced childhood diarrhea. Promoting these effective interventions in rural communities of Ethiopia would save many lives of children from diarrhea.