



# **HYGIENE INTERVENTION REDUCES CONTAMINATION OF WEANING FOOD**

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# PRESENTATION OUTLINE

- I. CONTEXT/JUSTIFICATION
- II. DEVELOPMENT USING HACCP
- III. TESTING THE INTERVENTION
- IV. REPLICATION; BANGLADESH & NEPAL
- V. RECENT DEVELOPMENTS/PERSPECTIVES

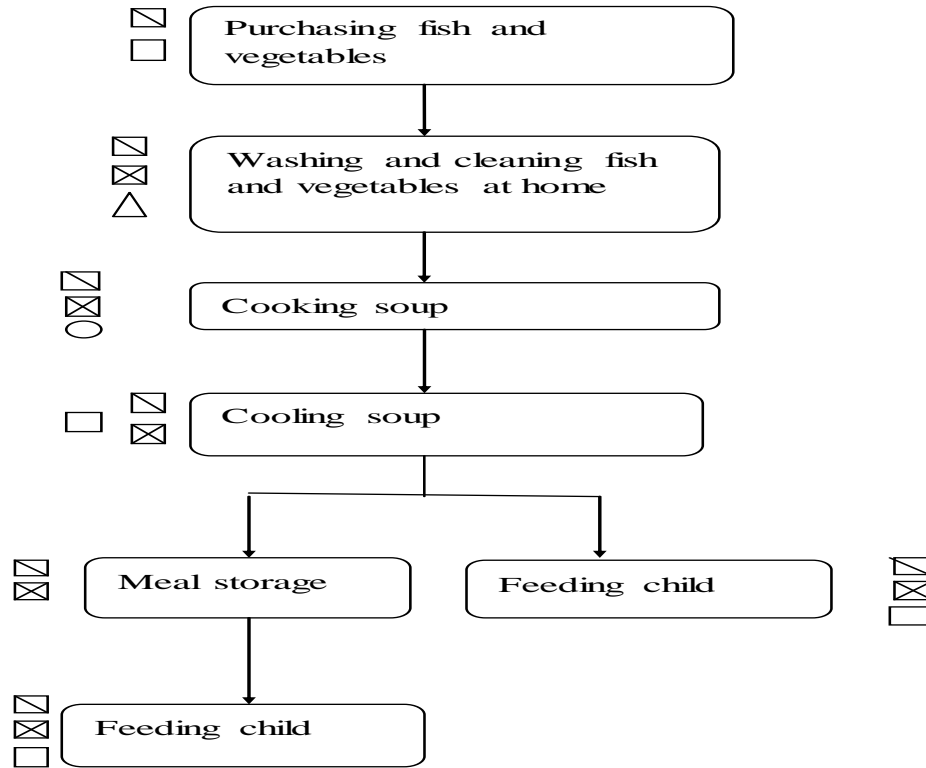
# CONTEXT/JUSTIFICATION

- Diarrhoeal diseases mainly kill children under five years in developing countries;
- Diarrhoea control thus needs to stop young children ingesting pathogens;
- Weaning foods are usually more heavily contaminated than drinking water;
- Weaning food hygiene deserves high priority.

# EXPERIMENTAL STUDY, TO DEVELOP INTERVENTION

- 15 mothers of children aged 6 to 36 months;
- Selection of 2 commonest weaning foods - moni & fish soup;
- intensive observation of food preparation and handling hygiene;
- Implementation of HACCP Method.

# Fish Soup flow diagram



## Legend

- Initial contamination
- ▣ Hand contamination
- ⊠ Utensils contamination
- Ingredient contamination
- △ Water contamination

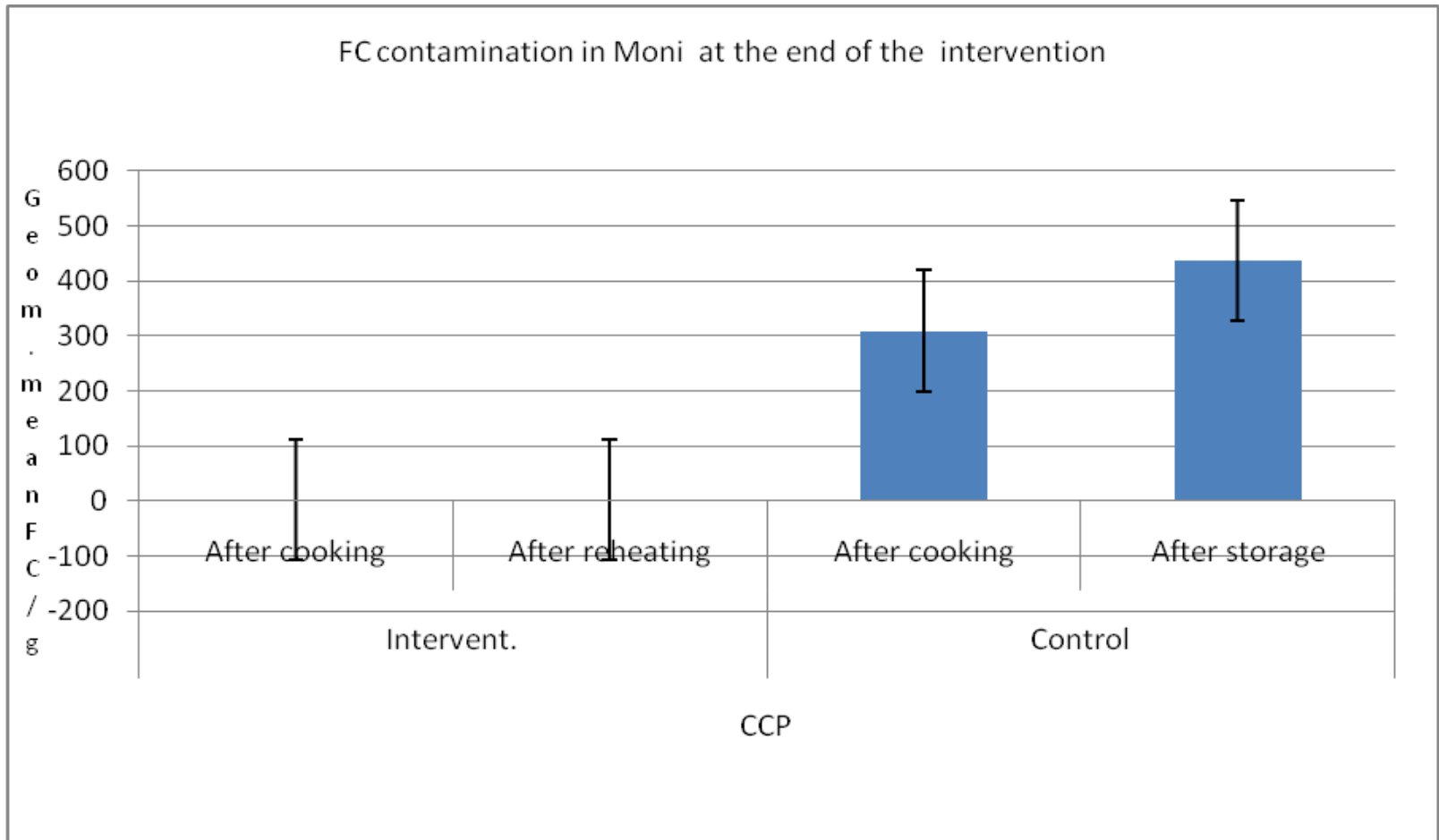
# PILOT STUDY, TO TEST THE INTERVENTION

60 mothers; 30 Intervention, 30 control;  
3 weeks' training for intervention group;  
samples examined for faecal coliforms.

## Intervention key messages:

- Reheating meals to boiling point, even if for only a few seconds;
- Handwashing with soap after faecal contact and before handling food;
- Running water and soap to wash dishes

# FC CONTAMINATION OF INTERVENTION GROUP'S FOODS AT THE END OF THE INTERVENTION



# LESSONS LEARNT FROM THE INTERVENTION

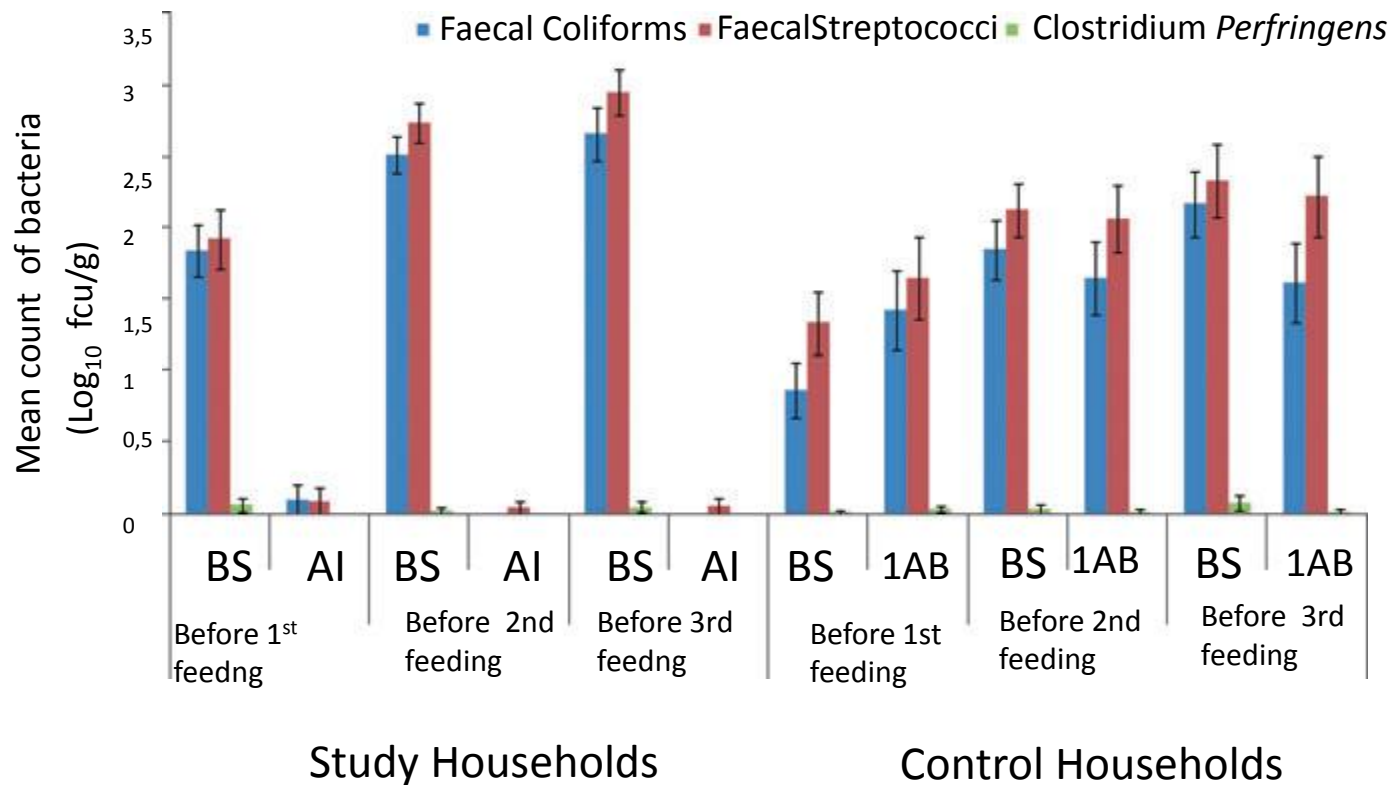
- The intervention was very effective in FC contamination reduction; it resulted in a very high performance in meeting the quality standard of less than 10 fcu/g;
- Behaviours acquired lasted for at least three months after the intervention.



# REPLICATION STUDY

- Bangladesh, rural setting;
- Copied Bamako protocol with 2 local weaning foods (Suzi & Khishuri)
- Same result!
- ***The method has already been integrated into the National Diarrhoea Prevention Strategy of Bangladesh (Dr S. Islam, ICDDR,B)***

# INTERVENTION IMPACT ON BACTERIOLOGICAL WEANING FOODS SAFETY



# Recent developments, future perspectives

- **Replication in Nepal:**
  - at District scale, reduced cost to US\$ 17 per mother (Om Gautam);
  - Impact on diarrhoea incidence discernible, though study under-powered.
- **In the Gambia:**
  - Similar study due soon (Buba Manjang, Ministry of Health) & University of Birmingham;
  - Unicef Gambia considering implementation at national level.



**“Disgust exercise” using glo-germs in mother’s hands during “Safe Food, Healthy Child” campaign in Nepal, 2013.**

*Photo credit: Om Pd Gautam, DCD/ITD, LSHTM*

# CONCLUSION/RECOMMENDATION

- The HACCP Approach is effective in FC contamination reduction through hygiene intervention;
- Behaviours acquired last for at least three months after the intervention.
- These very encouraging findings need to be translated into Health Education Programs' guidelines;
- The Approach reserves to be scaled up to assess its impact in diarrhoea prevention/reduction.

THANK YOU VERY MUCH FOR YOUR  
KIND ATTENTION