

# You are what you eat... why food hygiene matters for child growth

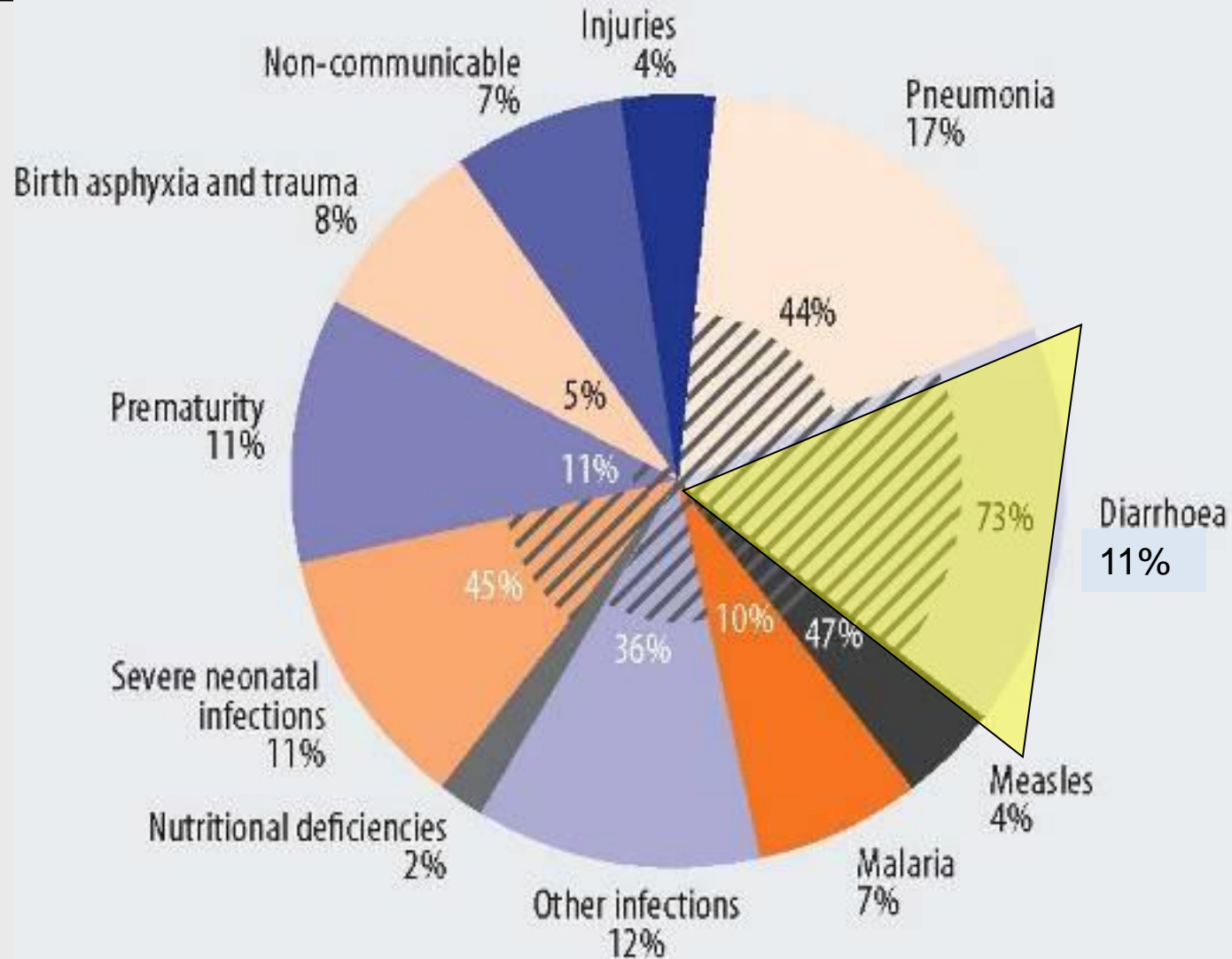


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USAID WASHplus Project

# Percentage of Diarrheal Deaths Attributed to Undernutrition

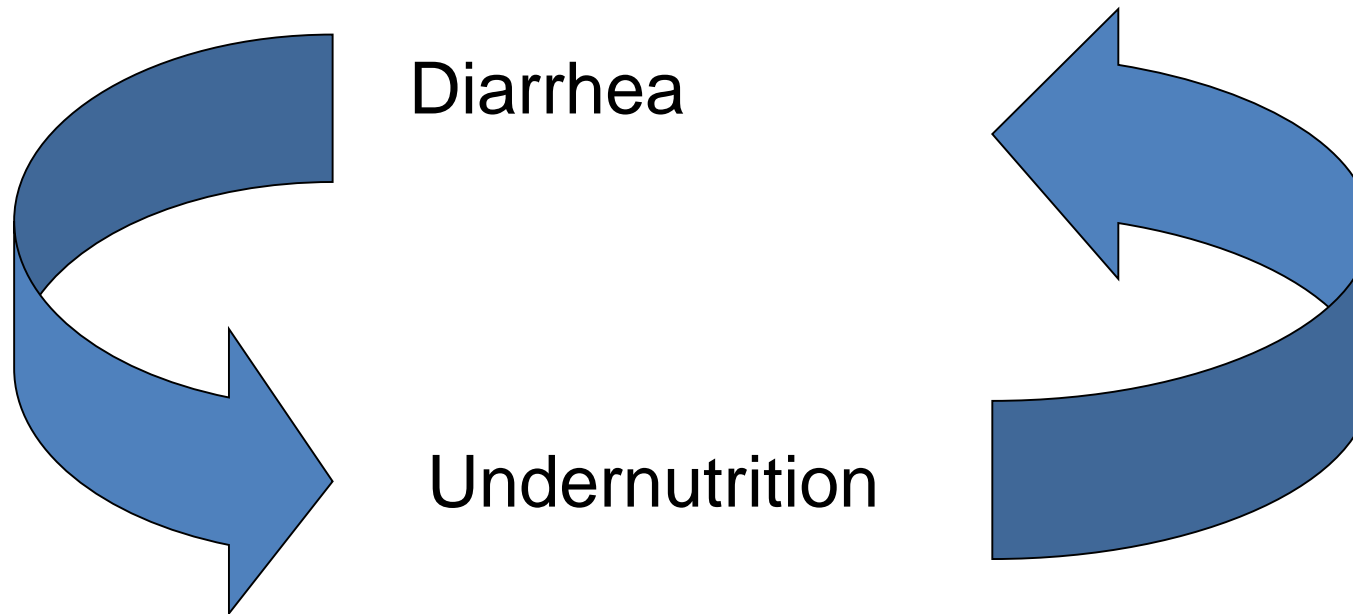
**Diarrhea: 11% of all child deaths**

**Undernutrition contributed to **73%** of these deaths**



Shaded area indicates contribution of undernutrition to each cause of death

# Connecting WASH and Nutrition



Diarrhea

Undernutrition

- Children with diarrhea tend to eat less
- With diarrhea, nutrients from food are not well-absorbed
- Undernourished children are more susceptible to diarrhea

# Stunting – *low height (or length) for age*

- One of three common anthropometric measures
- Sign of chronic under-nutrition



*In 2012*

162 million stunted children ....  
¼ of under-five children!!!

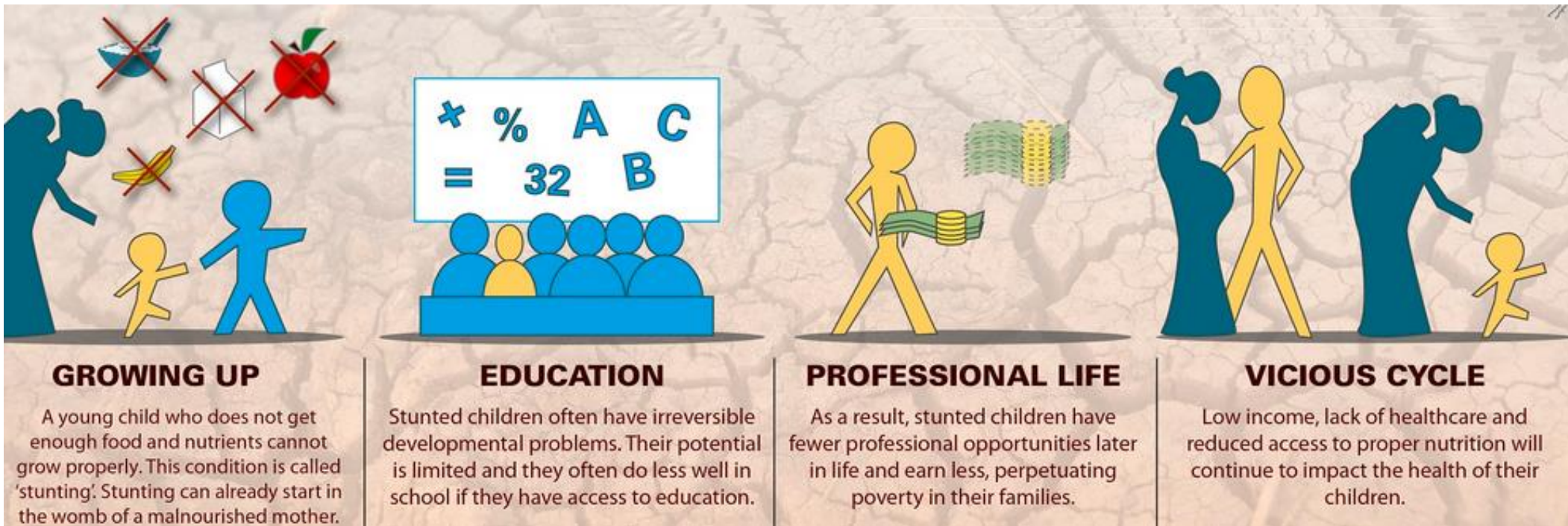
Over 90% stunted children live  
in Africa and Asia

36% African children

56% Asian children affected



Stunting has lifelong implications...  
A stunted child will never learn or earn  
as much as if they'd been properly nourished...  
*And the damage can't be un-done...*



# What is causing all this stunting?

Cause #1: Malnourished Mother

Cause #2: Poor Diet  
(inadequate weaning foods)

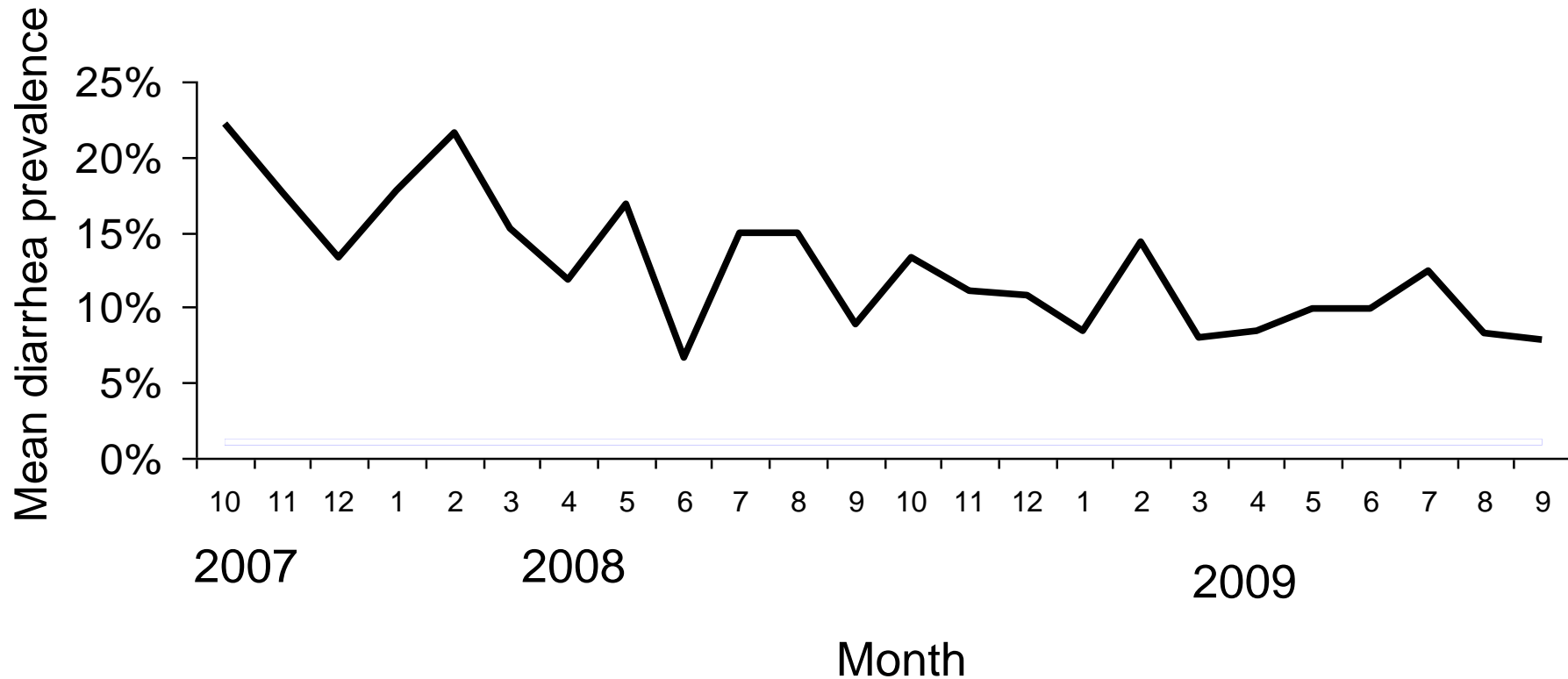
Cause #3: Diarrhea



# Prevalence of Diarrhea among children < 5 years by observed Handwashing before preparing food

SHEWA-B, Rural Bangladesh

— None **12.5%**

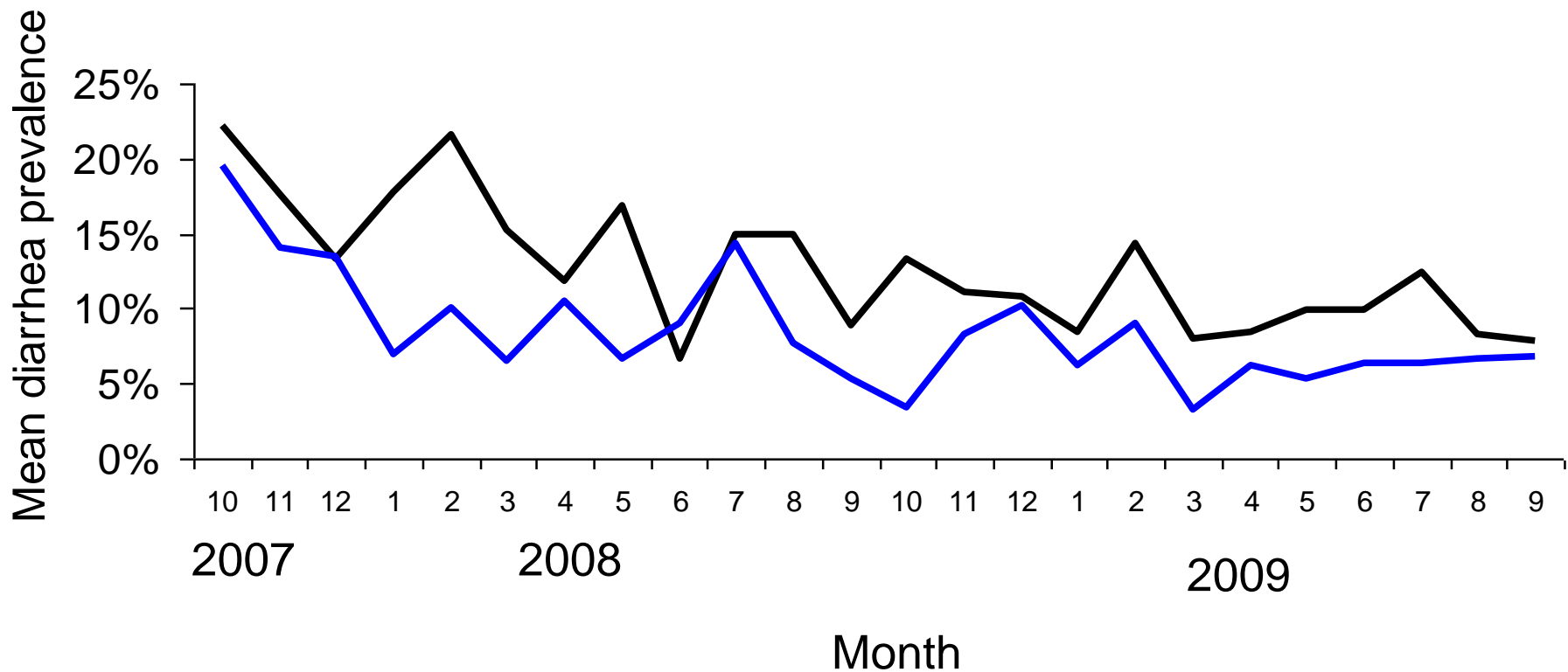




# Prevalence of Diarrhea among children < 5 years by observed Handwashing before preparing food

SHEWA-B, Rural Bangladesh

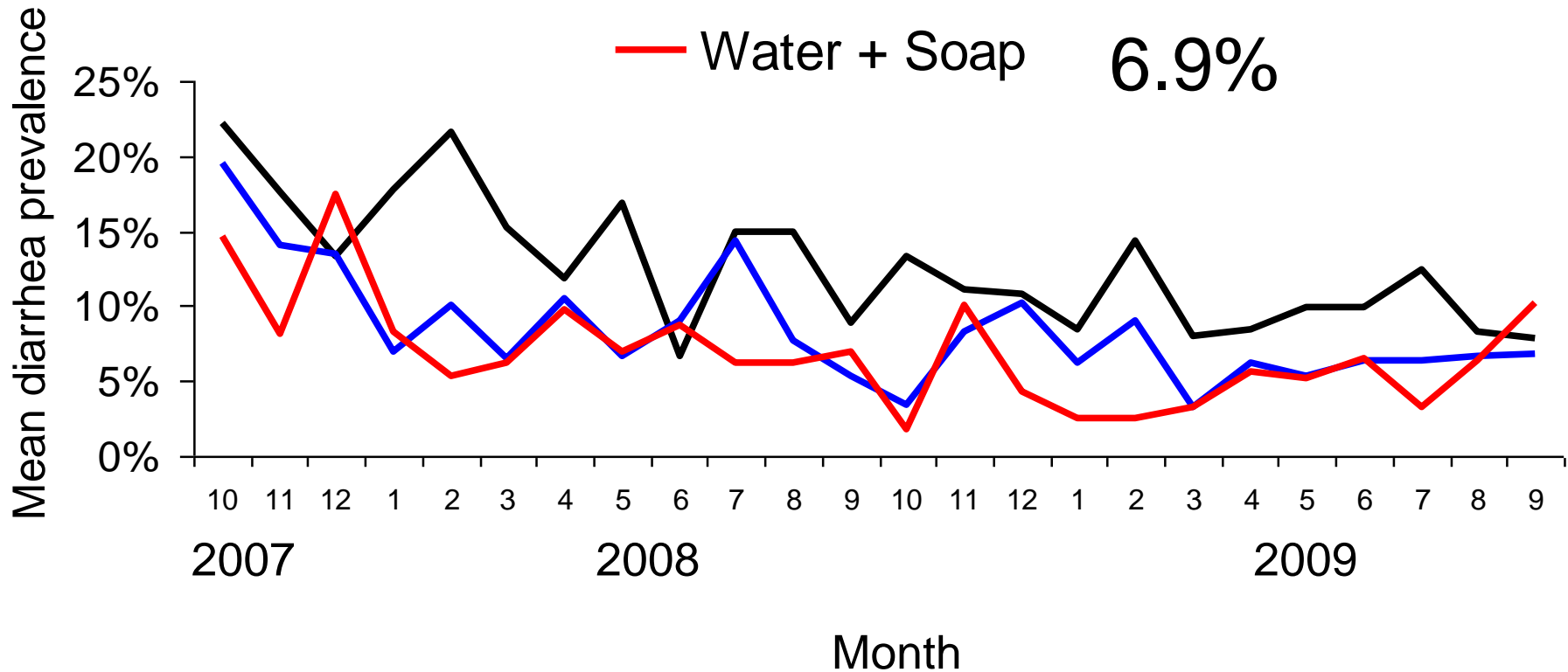
— None 12.5%  
— Water 8.3%

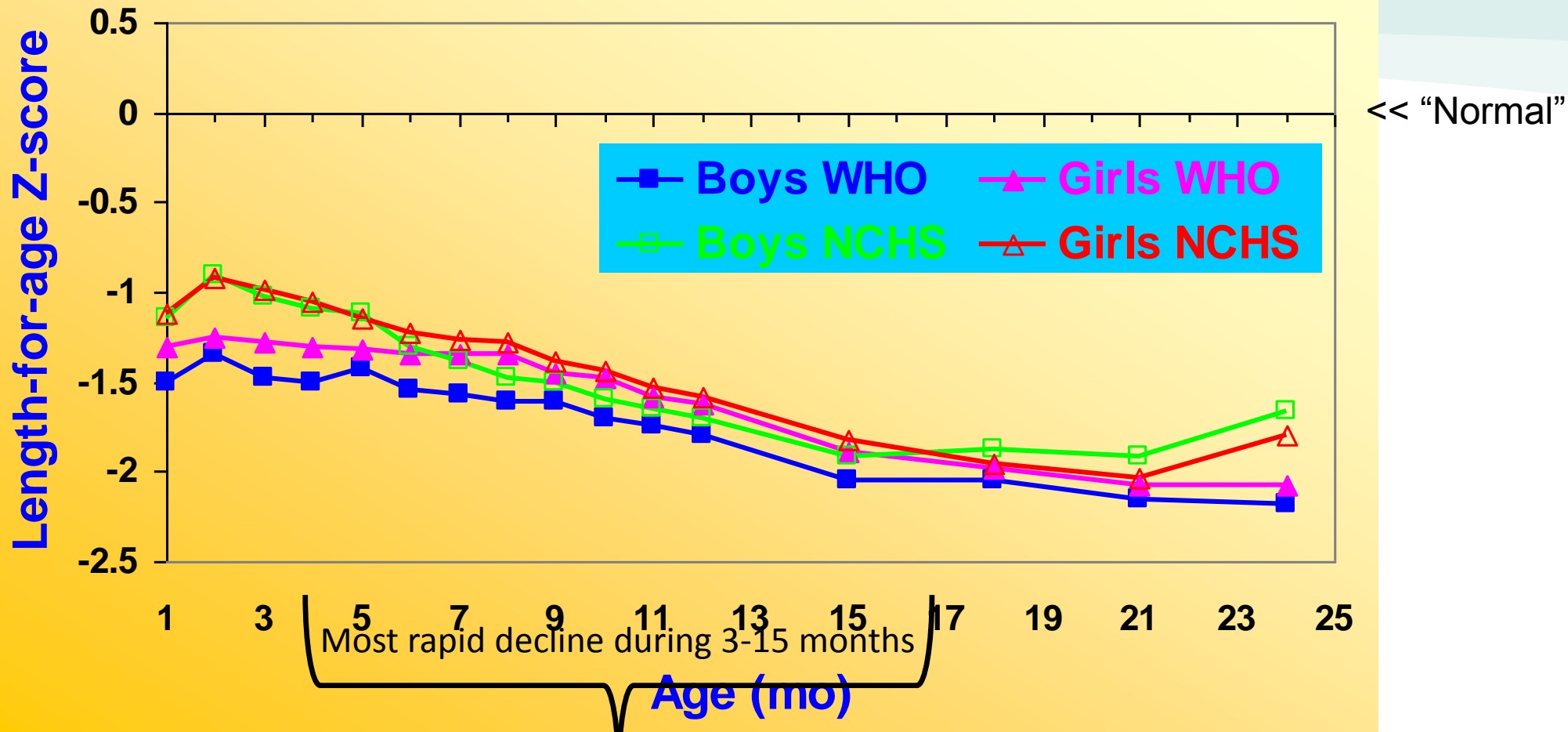


# Prevalence of Diarrhea among children < 5 years by observed Handwashing before preparing food

SHEWA-B, Rural Bangladesh

— None	12.5%
— Water	8.3%
— Water + Soap	6.9%





KK Saha et al (ICDDR,B),  
Food and Nutrition Bulletin 2009

Most damage occurs during complementary feeding age

# What Causes Diarrhea?

- Caused by a host of bacterial, viral and parasitic organisms most of which can be spread by water contaminated with human faeces or animal faeces
- Food is another major cause of diarrhea when it is prepared or stored in unhygienic conditions.
- Water can contaminate food during irrigation, and fish and seafood from polluted water may also contribute to the disease.

## Safe Feces Disposal



# Focus on WASH behaviors for Diarrhea Disease Reduction....

## Handwashing



## Safe Storage & Treatment of Water



*Add some?? Namely food hygiene,  
safe disposal of INFANT feces,  
ANIMAL/poultry feces*

*? 'diaper' handling?*

*? animal corralling?*

*? protective play spaces?*

# The core messages of the WHO Five Keys to Safer Food are:

- keep clean;
- separate raw and cooked;
- cook thoroughly;
- keep food at safe temperatures; and
- use safe water and raw materials.









To reduce DD, to reduce stunting,  
we need to get FECES out of the environment...  
Out of water, off hands, out of the food we eat ...  
Break the cycle of 'oral-fecal' contamination...

Food becomes contaminated in production, storage, handling, preparation and serving

- Group exercise
  - In groups of six, brainstorm 4 ways food can become contaminated in each of the categories.

## Debrief: Ways food becomes contaminated in production, storage, handling, preparation & serving

- Not storing at the correct temperature
  - No refrigeration, exposing to the sun
- Allowing mice, roaches, flies to contaminate
- Harvesting, storing with contaminated hands, clothes
- Inadequate cooking of food, undercooking or not cooking to the correct temperature. Germs (bacteria) are often found in raw meat. Adequate cooking usually kills the bacteria.
- Contamination by someone preparing the food who has not washed their hands with soap and water.
- Contamination from other foods (cross-contamination) e.g. not washing a board used to prepare raw meat before cutting carrots. Storing raw meat in the 'fridge' above food that is 'ready-to-eat' and allowing raw meat juices to drip on to the food below.
- Bacteria can also be present in unpasteurized milk and cheese. The pasteurization process (or heating) kills the bacteria.

# Small Doable Actions for WASH Behavior Change

- People rarely move from current to ideal practices
- Make it possible!!
- Identify, promote and facilitate improved behaviors that...

- Have significant **positive impact** on health

- Are **feasible** from 'actor'

point of view in resource constrained settings

- Construct a continuum
- Integrate!!



# ASSESSMENT AND NEGOTIATION

Father's/Mother's Name: \_\_\_\_\_ Name of the Village Health Team: \_\_\_\_\_  
 Village: \_\_\_\_\_ Date of Visit: \_\_\_\_\_

1. Assess with the householder what they are doing now for each of the key behaviors and mark a check in the corner of the current practice.
2. Based on the current behavior, discuss the improved behaviors to the right of the current practice. During your discussion, ask...
  - What problem the family will face to change the current practice to the improved behavior?
  - Discuss if there is any one in the family who opposes to change the current behavior due to culture or other reason.
3. Circle one, two or three behavior/s that you agreed upon to practice.
4. Seal the agreement as a commitment and make an appointment to see the improvement behavior.
5. Finally, hand this card to them to put it securely on a wall or store in the family health card.

"It is all our responsibility to end open defecation, unhygienic practices and the diseases they bring!"

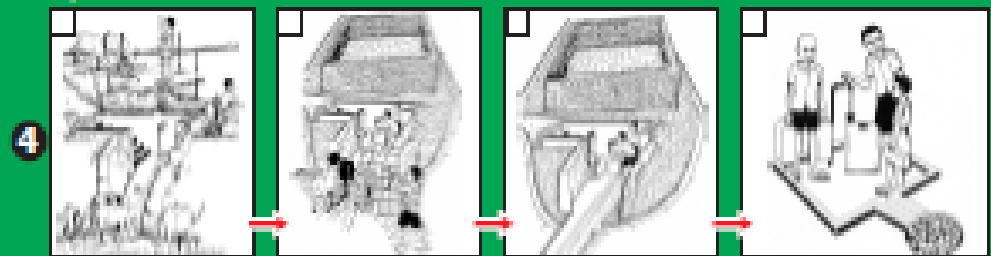
## Disposal of feces



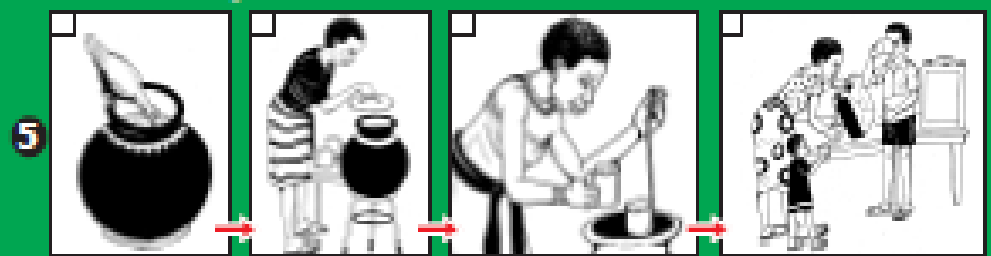

## Washing hands with soap/ash after defecation



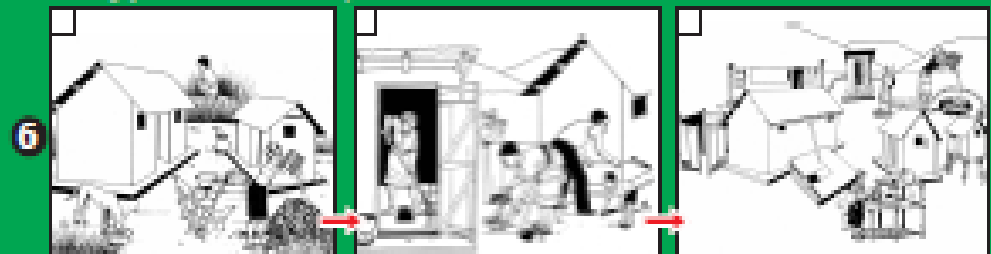
## Keep Water source clean



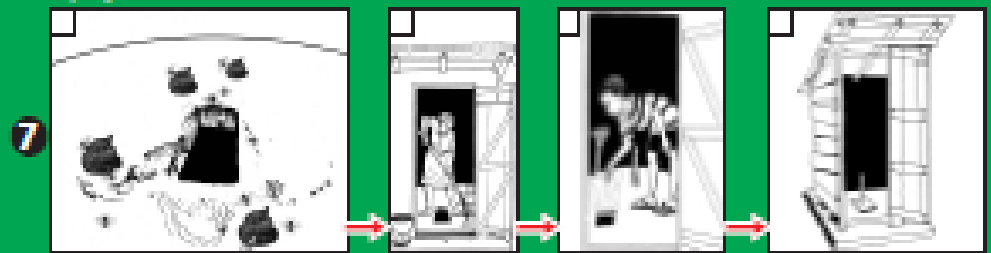
## Safe water handling



## Cleaning your house and compound



## Keeping latrine clean



## Essential times for hand washing



# Small Doable Actions For Keeping Food Safe: Food Handling & Preparation

*It is especially important to wash hands and food containers with soap and flowing water before handling food to minimise the risk of germs. Adhere to all personal hygiene practices like keeping fingernails short while handling food.*



- ◆ Construct a tippy tap close to the kitchen to ensure hand washing with soap.
- ◆ Wash hands with soap before preparing food.
- ◆ Keep fingernails short and clean.
- ◆ Prepare raw meat or fish away from other raw foods. Don't allow juices to touch other foods.
- ◆ Wash area where food is prepared at least daily, with water and Jik, if available, otherwise soap.
- ◆ Wash raw vegetables and fruits under running water to remove germs, insects, and chemicals.
- ◆ Keep animals (such as chickens) away from food preparation area.
- ◆ Wash all the knives, cutting boards, and plates used after cutting fresh meat with soap and water.
- ◆ For utensils used to handle cooked and ready-to-eat food, wash with soap and water and store on shelf or wall.

# RAINWATER HARVESTING OPTIONS

**RAINWATER HARVESTING IS A SUPPLEMENTARY WATER SOURCE.**  
 It is a free and cheaper option and enables households to increase access to water. It reduces distance to the collection point. It is friendly to conservation of our environment.



**1**  
**Rainwater harvesting without gutters**  
 This is not an effective option.



**2**  
**Rainwater harvesting in a drum using one gutter**



**3**  
**Rainwater harvesting with a water jar**



Cut out iron sheets to make gutters and delivery pipe. Use wires to mount gutters onto the roof.



**4**  
**Rainwater harvesting with a cistern**



**5**  
 Make a cover for the pit by using iron sheets.



**6**  
 Cut out iron sheets to make gutters and delivery pipe. Use wires to mount gutters onto the roof.



**7**  
 Finally fix the delivery pipe from the gutter to the cistern to have a complete rainwater harvesting cistern.



**8**  
 Make certain that children cannot get access to play in the water, to dirty from jer an b

Make certain that children cannot get access to play in the water, to dirty  
 Make certain no chickens or other animals' faeces can contaminate



# Nepal Hygiene Behavior Change

(Presad and Curtis, LSTMH/SHARE)

- Focused intervention to change five food hygiene behaviors
  - Water/ milk treatment
  - Cleanliness of serving utensils
  - Handwashing with soap
  - Proper storage
  - Thorough reheating





- Changing kitchen settings,
- Use of emotional drivers of nurture and disgust,
- Engaging events such as games, competitions
- (i.e. 'clean kitchen', 'ideal mother', 'safe food hygiene zone')
- Reminders

*... encouraged mothers to adopt and practice five key food hygiene behaviors*

*42%+ rise in ALL FIVE HYGIENE BEHAVIORS*

## *Change is possible!*

- Integrate WASH into nutrition and other child health activities
- Food hygiene is an essential part of diarrhea prevention and WASH
- Make it feasible for households through small doable actions



*Thank you !!*

More information or questions: [www.washplus.org](http://www.washplus.org)

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