



Why WASH Matters

For improved child health, nutrition & growth

A Knowledge Sharing Event

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FHI 360

USAID *WASHplus* Project

WASH is the common acronym for **W**Ater, **S**anitation and **H**ygiene

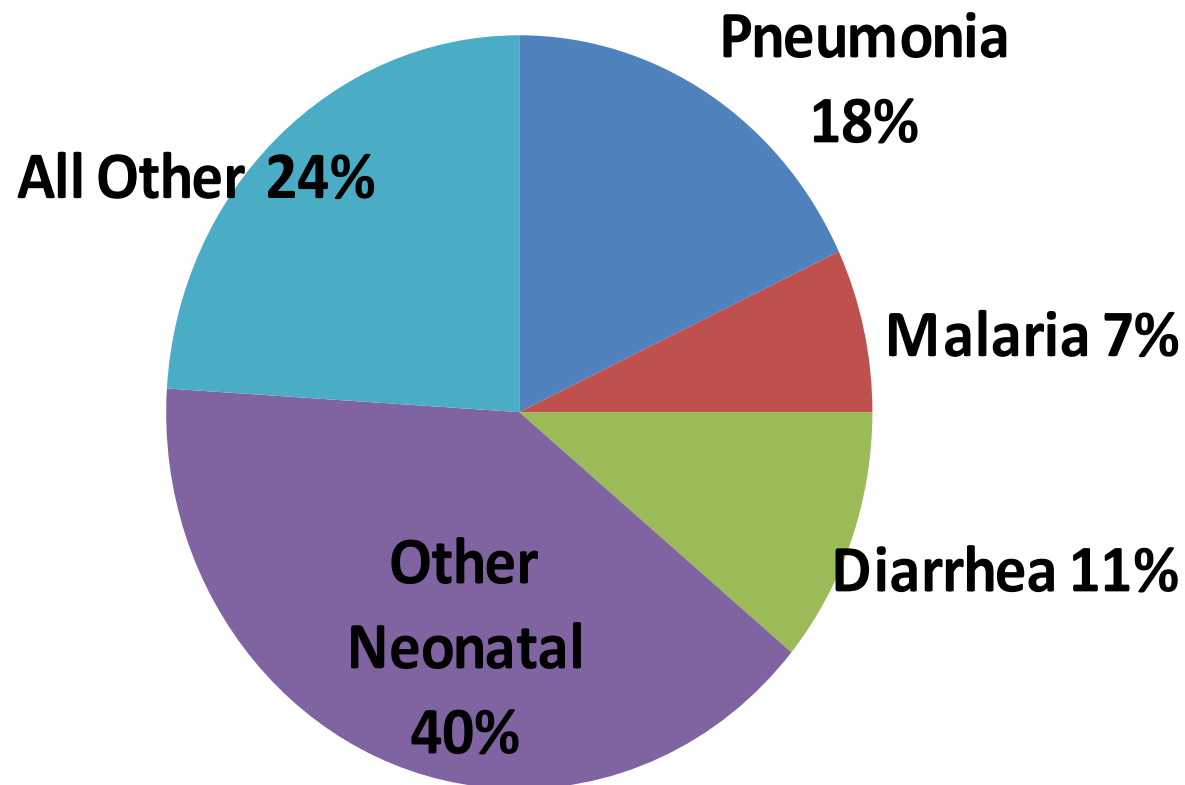
WASH is:

- Necessary quantities of safe, potable drinking water
- Wide spread community sanitation with latrines that meet minimum standards
- Consistent and correct handwashing at critical times
- Food hygiene

- Behavior change, not just hardware coverage and not just education

What kills more children each year?

Causes of Mortality for Children Under 5



Source: *State of the World's Children*,
UNICEF 2008

POP QUIZ!!!!!!!!!!

1. What percentage of child deaths caused by diarrhea are preventable through WASH related interventions?

- a. 0%-30%**
- b. 31%-60%**
- c. 61%-80%**
- d. over 80%**

How often does a child die from a water-related illness?

A child dies every **20 seconds** from water-related illness

- Since the start of this program 125 children have died!!!!



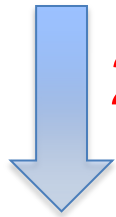
Safe Feces Disposal



30% ++

Focus on WASH Behaviors for Diarrhea Disease Reduction....

Safe Storage & Treatment of Water



21%



30-50%

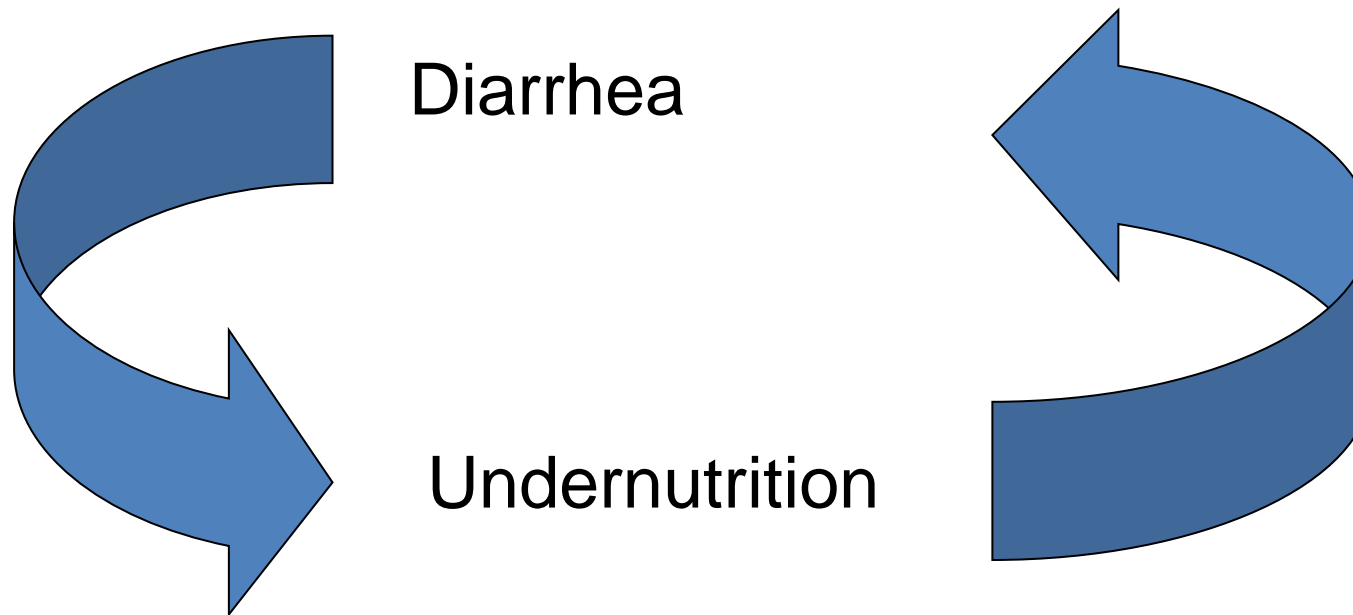


Handwashing

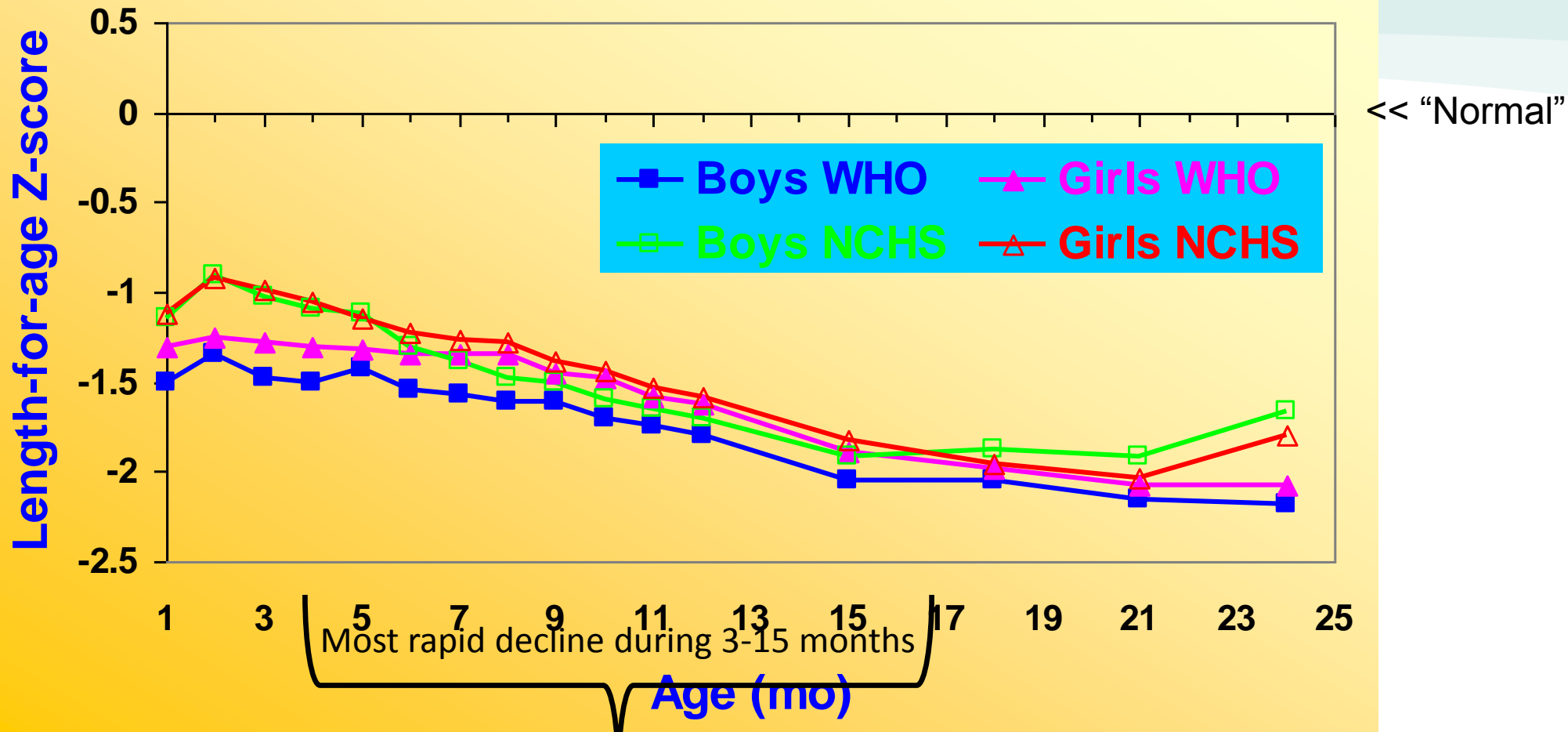


43%

Connecting WASH and Nutrition



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

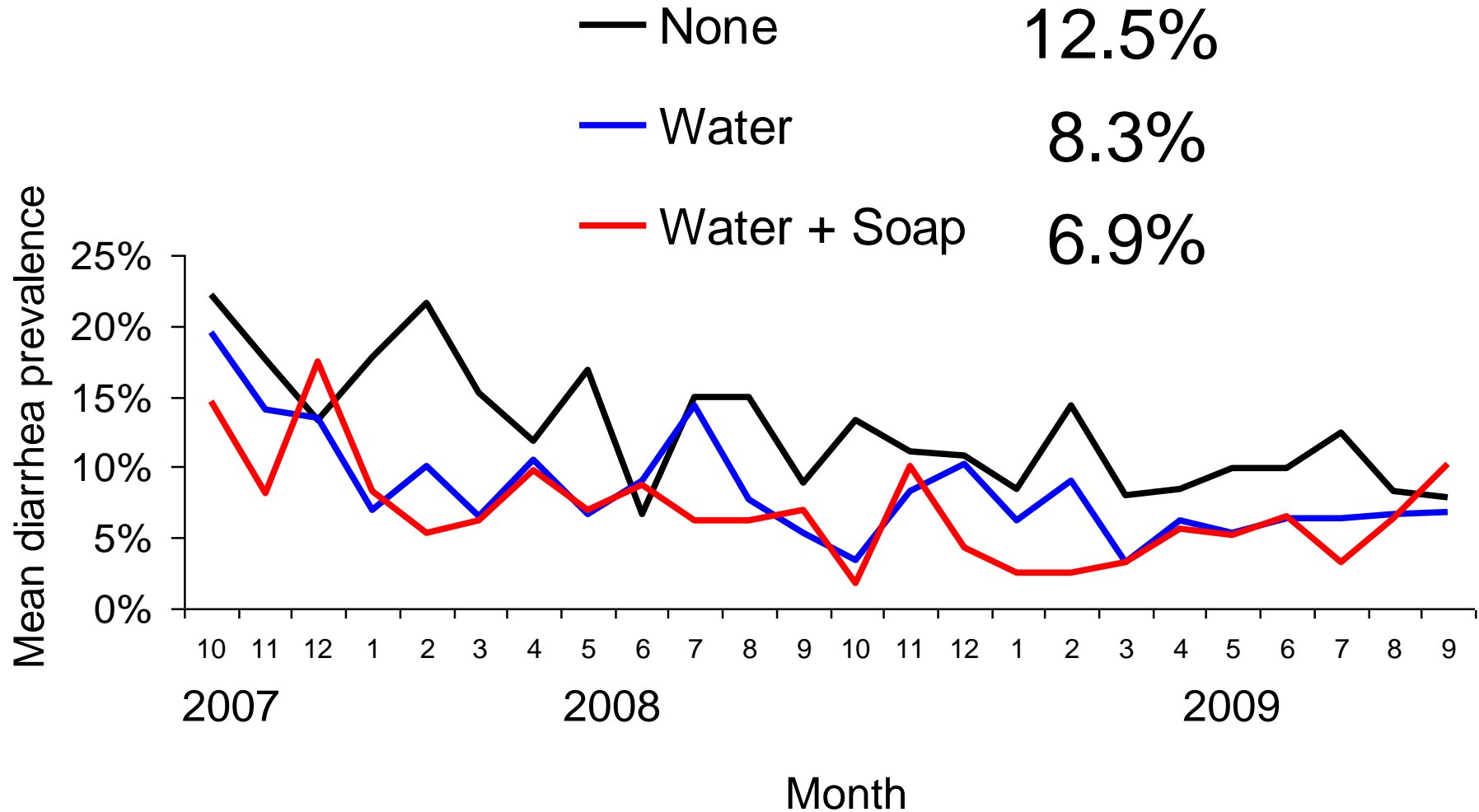


KK Saha et al (ICDDR,B),
Food and Nutrition Bulletin 2009

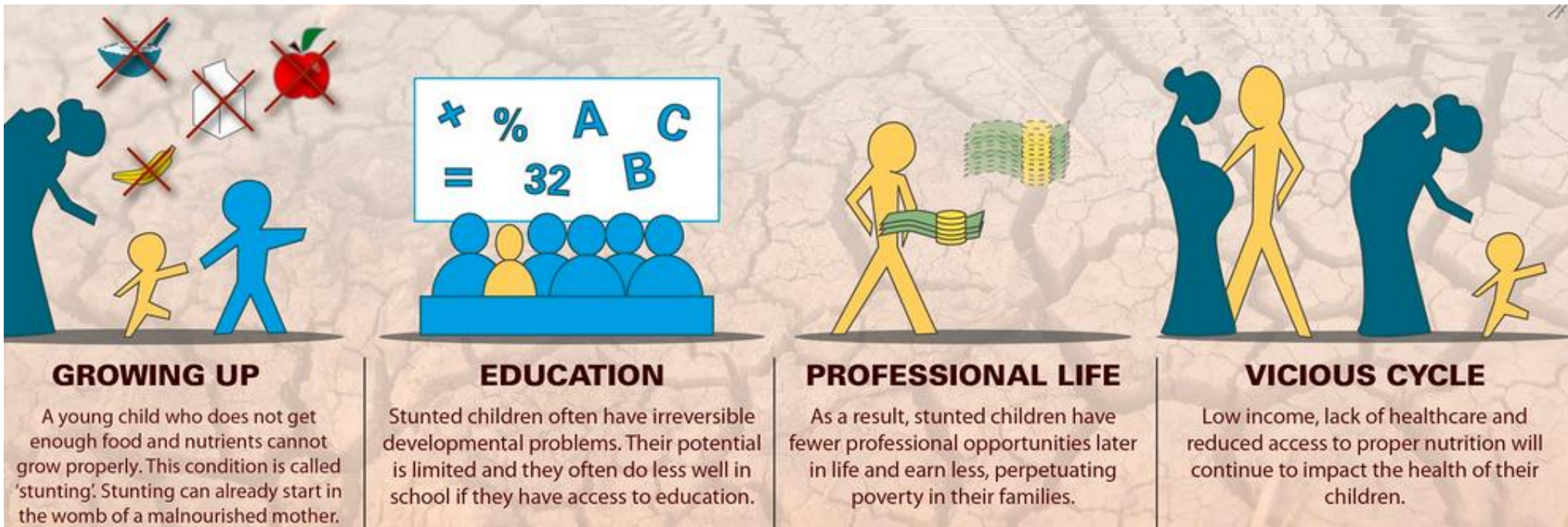
Most damage occurs during complementary feeding age

Prevalence of Diarrhea among children < 5 years by observed hand washing before preparing food

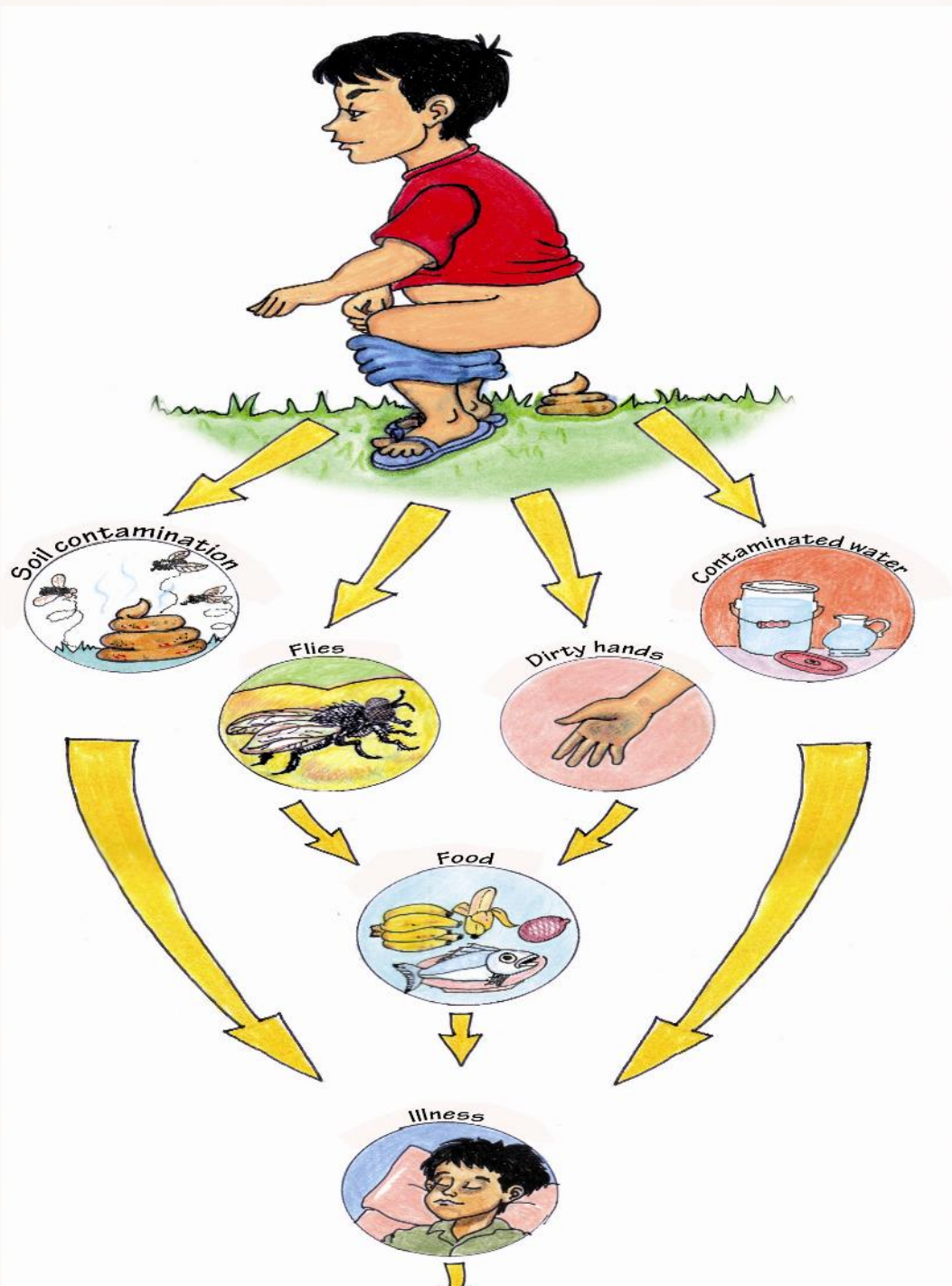
SHEWA-B, Rural Bangladesh



Stunting Has Lifelong Implications



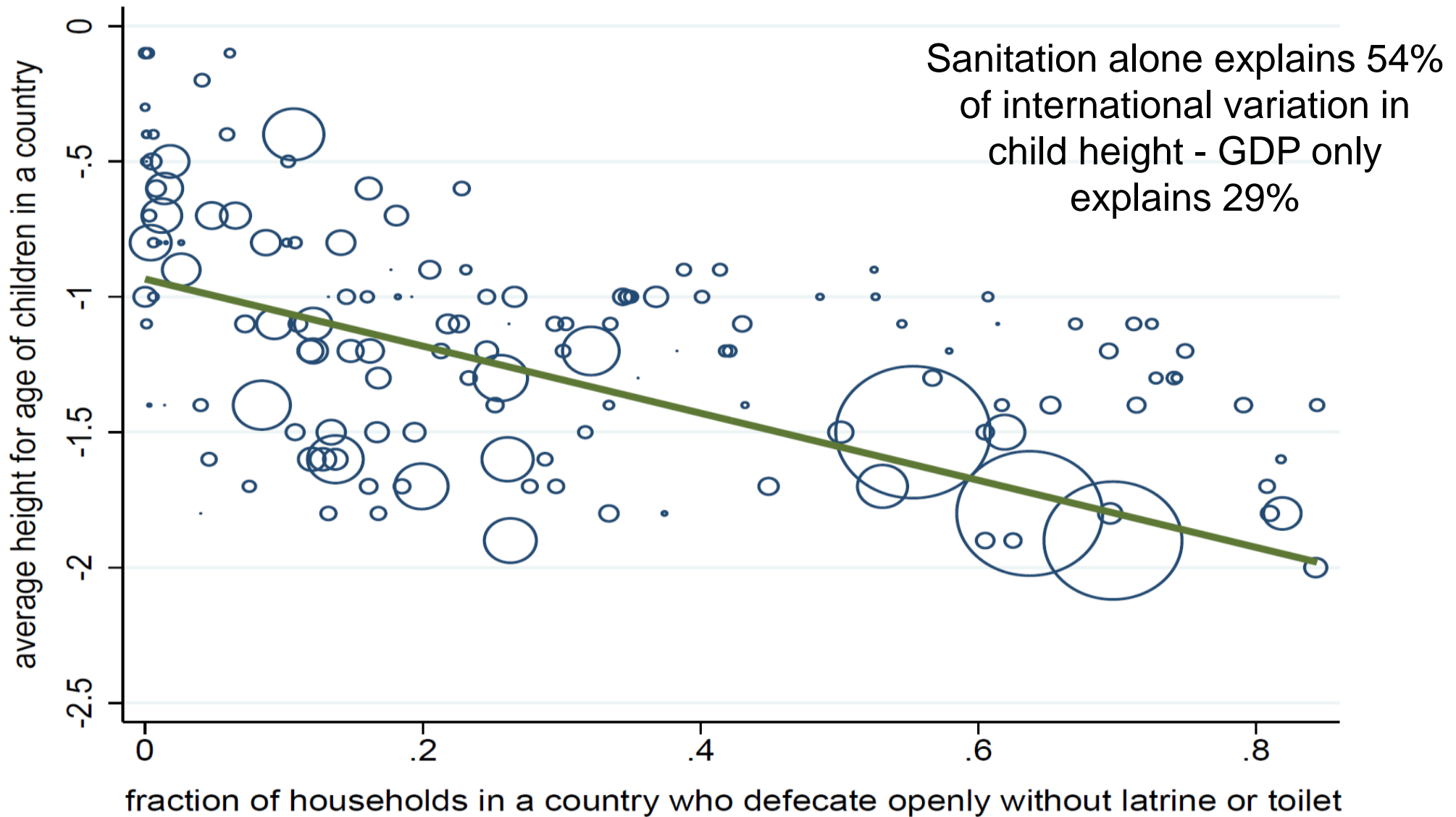
Contamination Cycle



**Reducing Diarrhea
Requires Getting
Feces Out of the
Environment...**

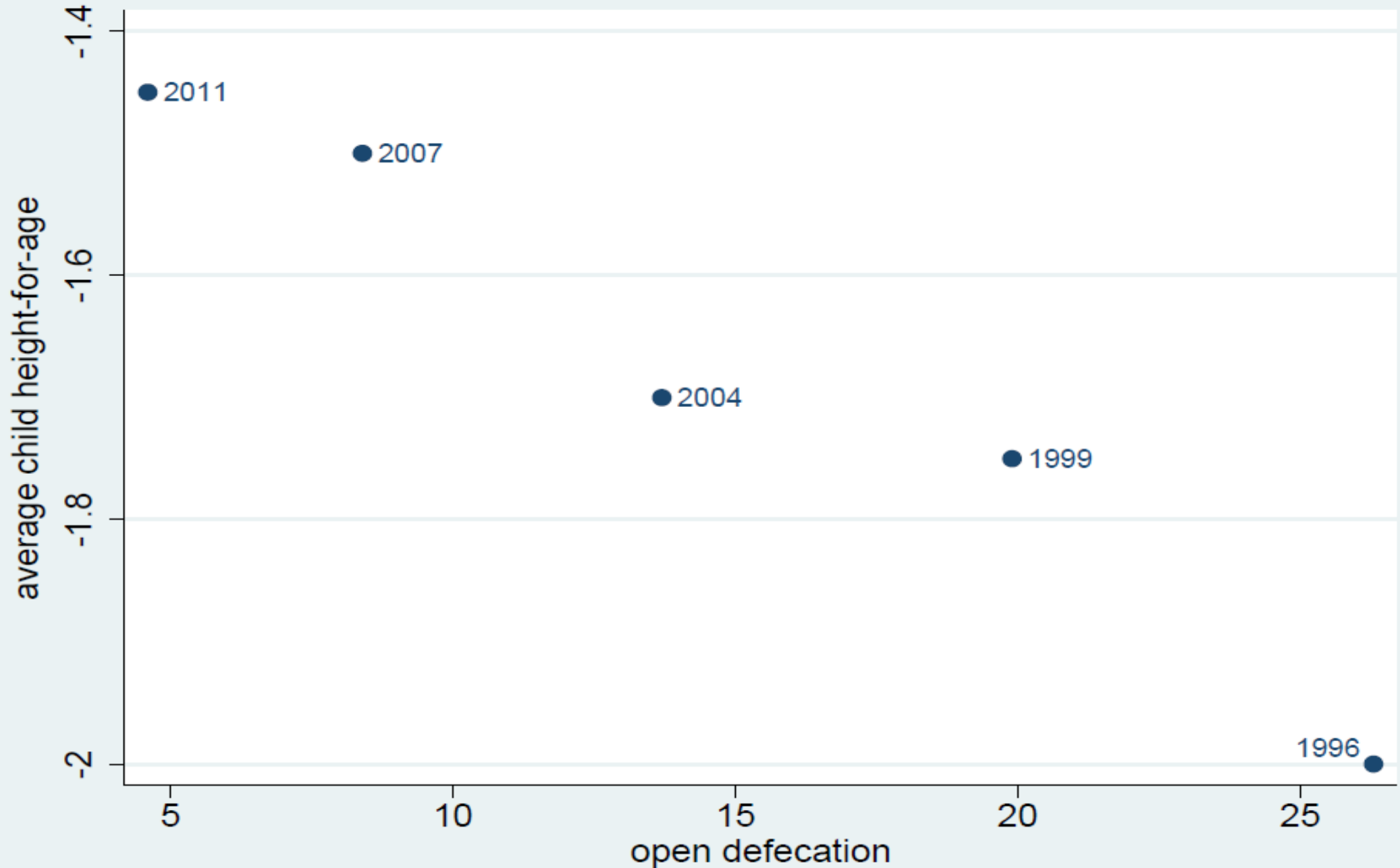
**How can we
break the cycle??**

Open defecation accounts for much of excess stunting- global trends



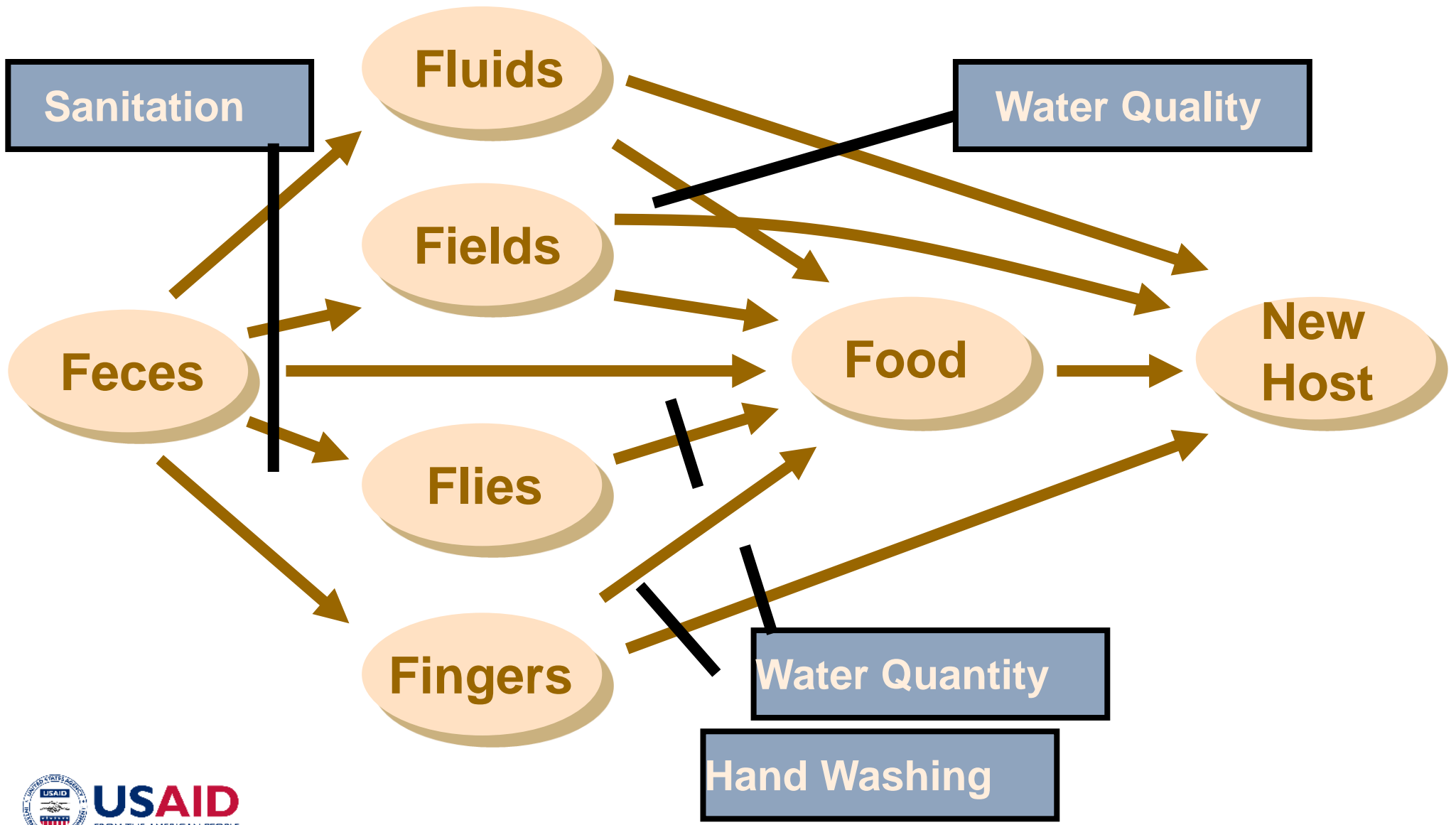
Source: Each data point is a collapsed DHS survey round (country-year), proportional to population.
Spears (2012) www.riceinstitute.org #13

Open defecation accounts for much of excess stunting- *Bangladesh DHS 2011*



Primary Prevention

The F-Diagram



Safe Feces Disposal



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

Safe Storage & Treatment of Water



Hand Washing

WASHplus Target Behaviors



- Correct hand washing at key times
- Fixed point defecation / use hygienic latrine
- Water safety

.... But there is something else
going on...

What is causing all this stunting?

Cause #1: Malnourished Mother

Cause #2: Poor Diet
(inadequate weaning foods)

Cause #3: Diarrhea



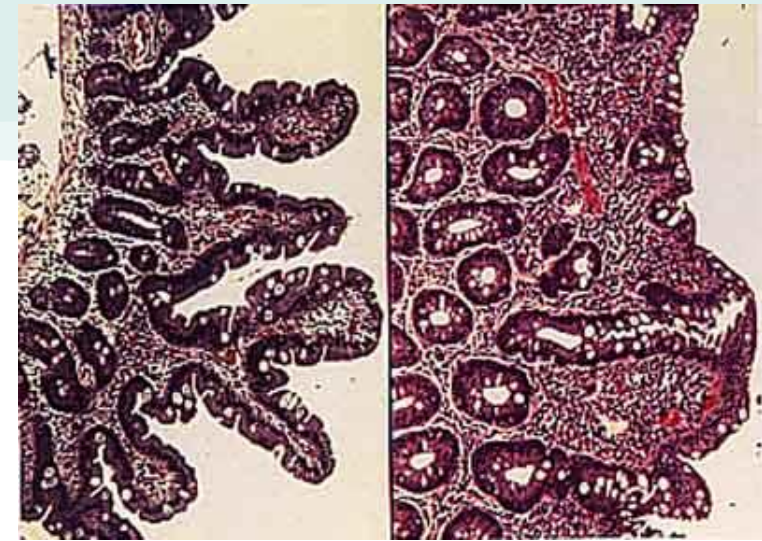
However:

Evidence exists that the effect of WASH interventions on linear growth is independent of its effect on diarrhea.

In several studies, WASH had a bigger effect on growth than it did on diarrhea

.... there is something else going on...

Cause #4: The Environmental Enteropathy Hypothesis



- A subclinical condition of the small intestine, called environmental enteropathy (EE)
- Characterized by:
 - Flattening of the villi of the gut, reducing its surface area
 - Thickening of the surface through which nutrients must be absorbed
 - Increased permeability to large molecules and cells (microbes)
- Likely causes:
 - Too many microbes in the gut
 - Effects of toxins on the gut

.... But there is something else going on...

Most frequent:

38 times in 6 hours

75% visibly dirty



Dirtiest

Soil (3 ate avg 11 bites)

chicken faeces, stones



If allowed, toddlers consume poultry feces

Peruvian shantytown families:

– Households who owned free-range poultry:

- **Average ingestion of poultry feces by toddlers per 12-hour observation period was 3.9 times**

– Marquis GM et al., Am J Public Health 1990

Rural Zimbabwe:

– Not selected for poultry ownership:

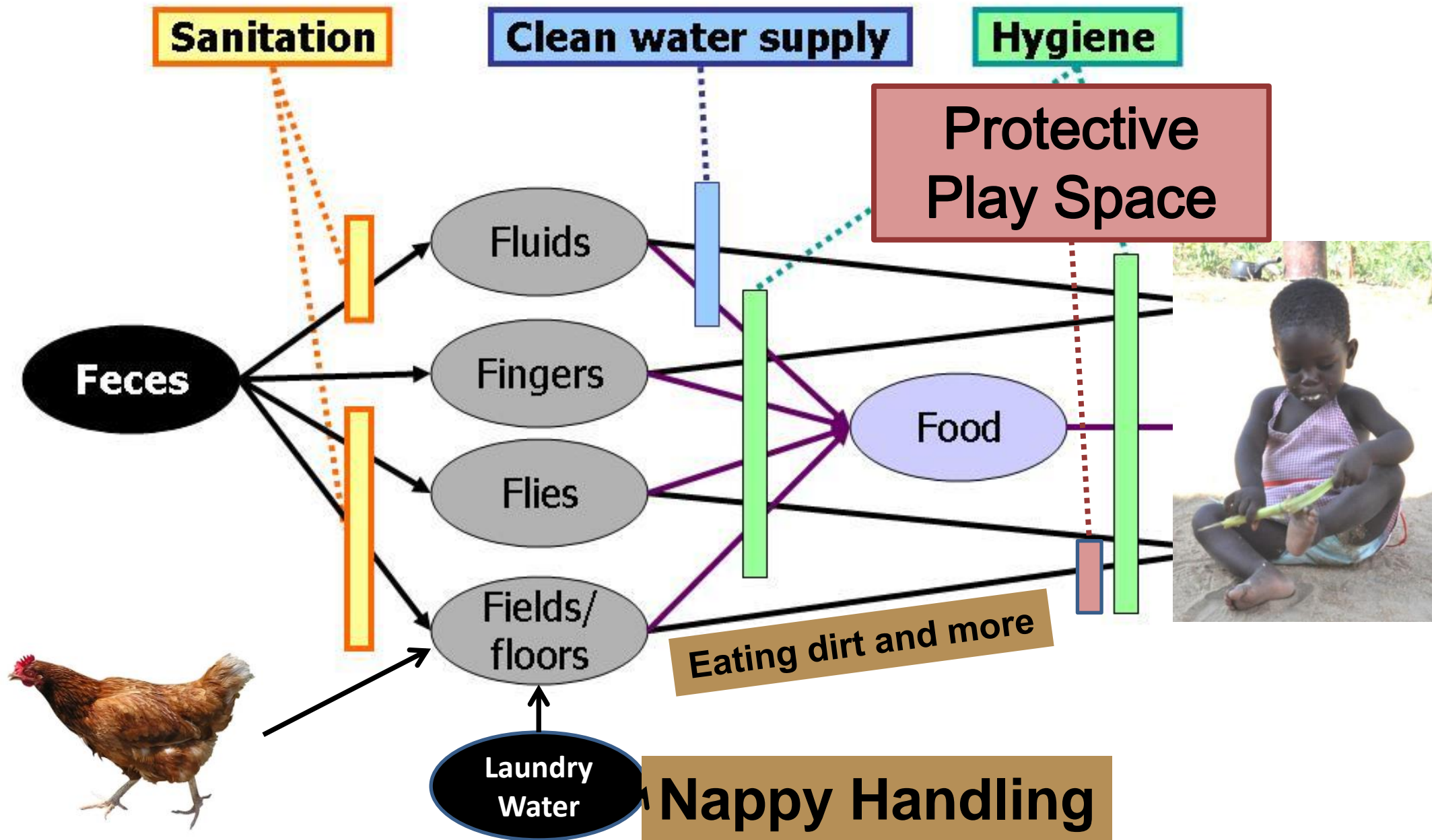
- **3 of 7 toddlers directly ate chicken feces during a 6-hour observation period.**

– Ngunjiri F et al., submitted, 2012

	% HH with E coli + sample	E coil/ Per gram	Average E Coli Per Day
Infant Food	0%	0	0
Drinking Water	54%	2	800
Soil in laundry area	60-80%	70	1,400
Chicken feces	100%	10,000,000	10,000,000

Clearly, kids must stop eating dirt and chicken poop!

Routes of fecal disease transmission and protective barriers *for babies!*



What Influences Behaviors?

**Hygiene Behavior Change:
More Than Messages, More than Promotion**

What do we mean by behavior change?



Safe Feces Disposal



Focus on WASH Behaviors for Diarrhea Disease Reduction....

Hand Washing



Safe Storage & Treatment of Water



Small Doable Actions for Behavior Change

- Identify, promote and facilitate improved behaviors that....
 - Have significant **positive impact** on health
 - Are **feasible** to achieve, (people both willing and able to make changes)



Small Doable Action Approach

- Construct a continuum
- Identify feasible incremental steps that move people from a current hygiene practice toward the ideal practice
- Identify existing hygiene and sanitation good practices to be reinforced or modified
- Identify practices to be improved and negotiate the options with family member



Hand Washing

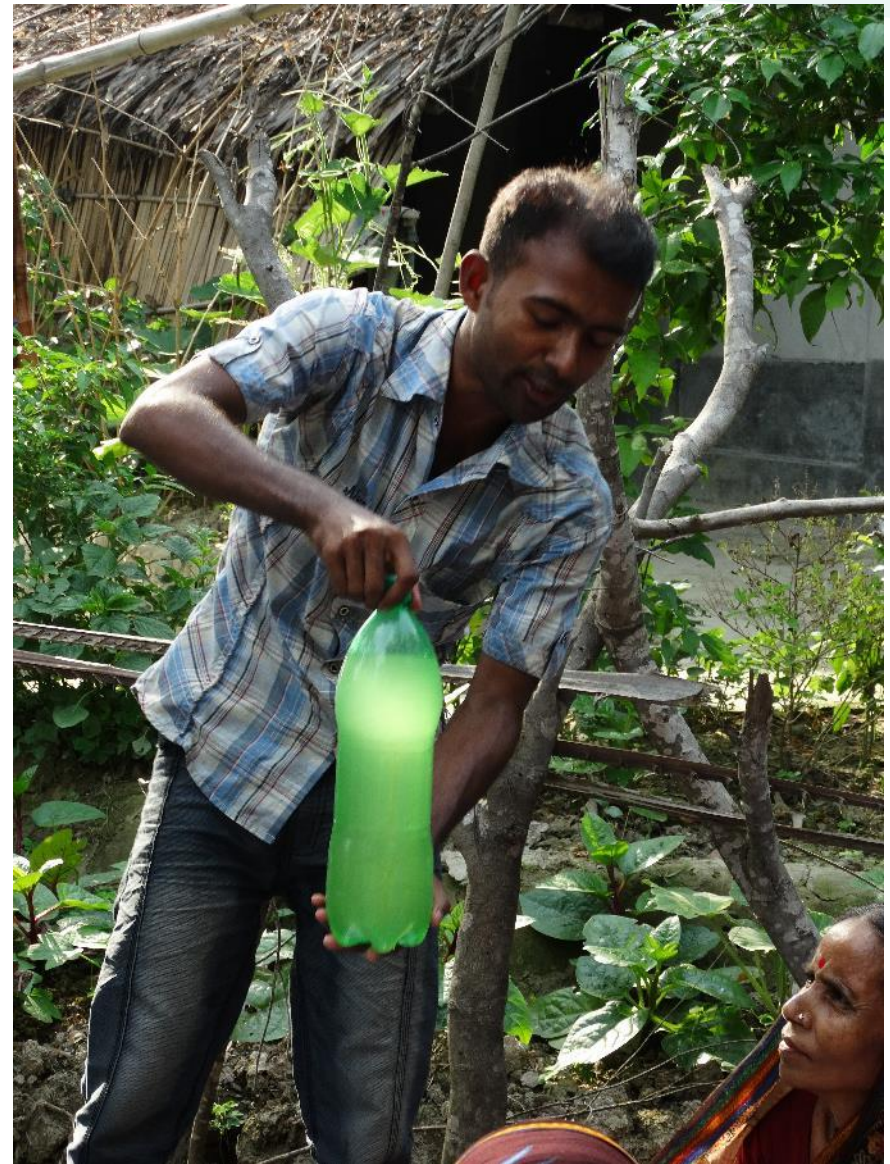
Current Practices Needing Improvement

- Hand washing without soap when soap is not available
- “Dip” hand washing from communal bowl
- No systematic hand washing after cleaning baby, the potty or after defecation
- No systematic hand washing before eating/cooking

Hand Washing (continued)

Small Doable Actions

- Use tippy tap to conserve water
- Create hand washing station next to cooking and eating area
- When soap is not available, use ash for hand washing—rub hands together, rinse, and air drying.



Using a hand washing station

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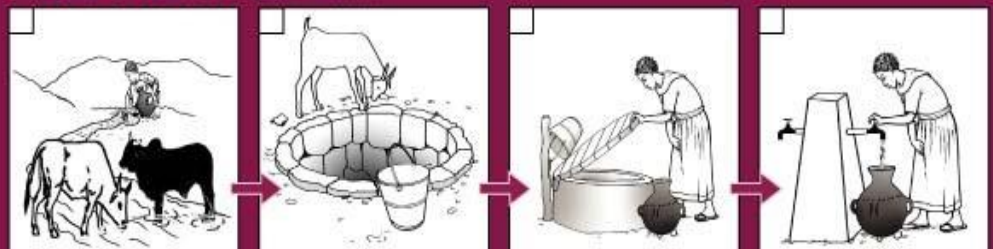
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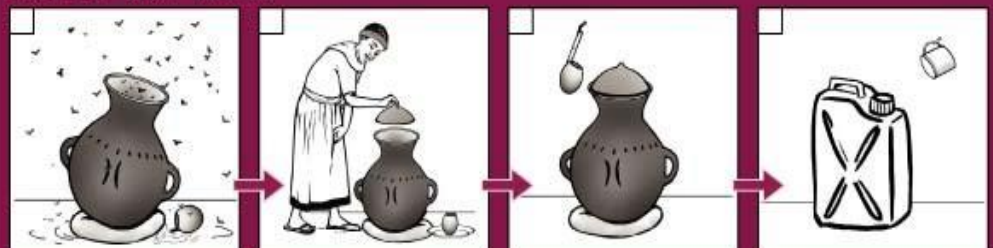
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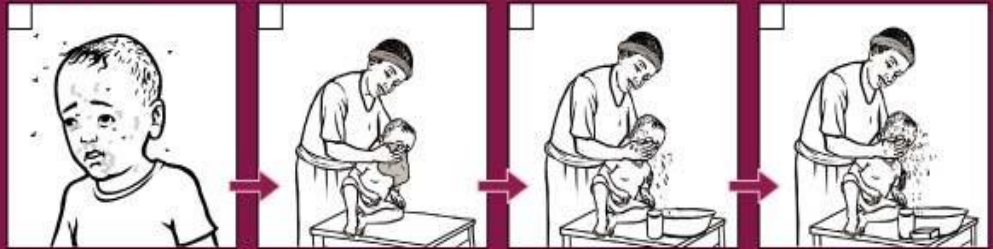
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Small Doable Actions for Safely Disposing of Child Feces

- Document CURRENT household practices for handling child feces by age cohort.
- Prioritize riskiest of practices
- Work with mothers to identify a few ‘small doable actions’ for each of these risky behaviors that will make it easier for mothers to manage child feces, but that still get them out of the environment.
- Test these with mothers, over time, for effectiveness and feasibility







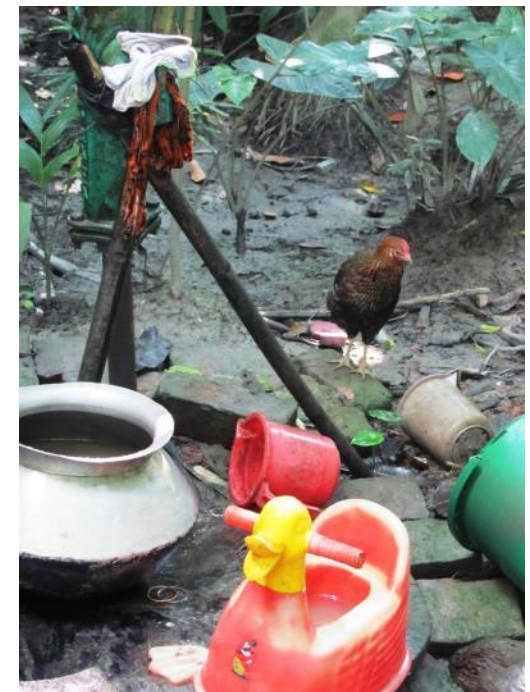
Small Doable Actions for Safe Feces Disposal

e.g. Using Potties/Emptying/ Cleaning Potties

- * Put ash in bottom of potty
- * Rinsing /cleaning potties – disposal of waste water AWAY from well



	CLEANING	SMALL DOABLE ACTION TO IMPROVE
INFANT		
Katha (old Diaper/ Par Rubber /Plastic)	Put the baby on cloth to clean him completely	Use the trowel/ho, take it to the toilet Plastic sheeting Plastic pants
When they know, they stand them up	Soap	
Use the trowel/ho, take it to the toilet	Anticeptic (savlon) just one	
	Put the baby	
	Clean themselves/sari /camis	
	Then took feces toilet	
	Few admitted toss in ditch, bush, garbage pit	
	Really insistent NOT in pond, not in garden	
	Throw into water body that they don't drink (e.g. canal)	
TODDLER (but we need a name)		
Some said as of 6 months ... start using potty	Take it to the latrine	
Like the potty, use it like a toy	Put water	
They just know.... When kid has to go	Dump it	
They talk to them	Brush	
They make noises... they tell stories	Detergent powder, clean it, dry it	
Some were duck, some weren't	Others... Tube well, clean it with soap	



- Just getting started with field assessment
- Invite your organizational participation
- Resources, capacity building materials, job aids available from WASHplus to help integrate WASH into nutrition programming and more!



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www.washplus.org