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

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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.
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

![Graph showing mean diarrhea prevalence over months from 2007 to 2009. The line indicates the prevalence of diarrhea by observed handwashing categories: None, Water, Water + Soap. The highest prevalence is observed in 2007, with a line of data showing fluctuations throughout the years. The graph includes the source: PLoS Med, 2011;8(6): e1001052.]
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Mean diarrhea prevalence

- None: 12.5%
- Water: 8.3%

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Mean diarrhea prevalence

- None: 12.5%
- Water: 8.3%
- Water + Soap: 6.9%

Month

2007 2008 2009

Mean diarrhea prevalence

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.
Focus on WASH behaviors for Diarrhea Disease Reduction….

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.
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: __________________________ Dates of Visits: __________________________

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 security 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 feaces
1. Keep water source clean
2. Use a proper latrine
3. Washington soap/ash after defecation

Safe water handling
4. Use clean water for cooking

Cleaning your house and compound
5. Keep your house and compound clean
6. Keep your latrine clean

Essential times for hand washing
7. Wash hands before eating
8. Wash hands after using the latrine

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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.
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

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