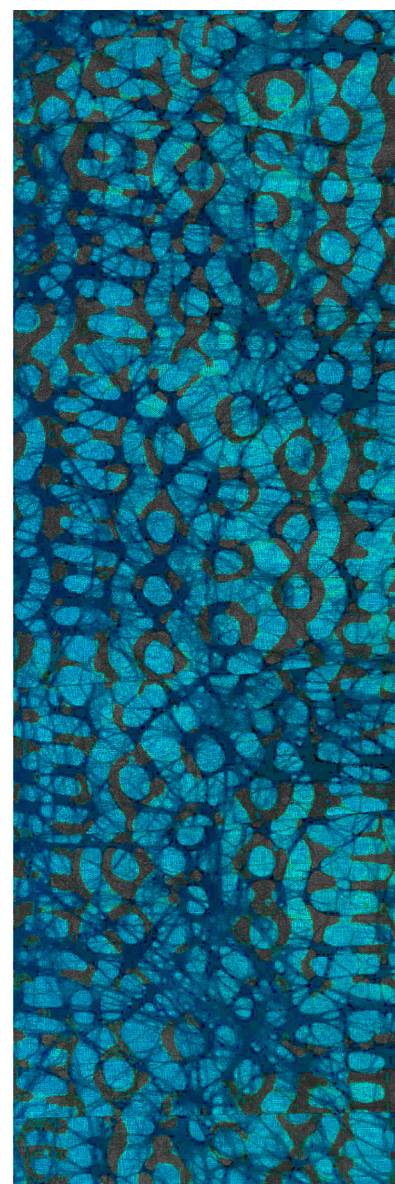


ESSENTIAL WASH ACTIONS

A Training and Reference Pack to
Supplement Essential Nutrition Actions



JUNE 2017



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Background

Why Essential WASH Actions?

Undernutrition is a major cause of disease and death, affecting millions worldwide, especially women and children in impoverished communities. Undernutrition, an underlying cause of approximately 45 percent of mortality in children under five, is directly caused by inadequate dietary intake and disease, and indirectly related to many factors including contaminated drinking water, and poor sanitation and hygiene. Since the 2013 Lancet series on Maternal and Child Malnutrition, the nutrition community has increasingly recognized the importance of both “nutrition-specific” and “nutrition-sensitive” interventions to address undernutrition, which include water, sanitation and hygiene actions for improved child growth. (See box for more explanation of nutrition-specific and nutrition-sensitive.)

The **Essential Nutrition Actions (ENA) Framework** was originally developed with the support of USAID, WHO and UNICEF, and has been implemented across Africa and Asia since 1997.¹ It promotes a “life cycle” approach to deliver the right nutrition services and messages to the right person at the right time using all relevant program platforms. The seven essential nutrition actions are all equally important and follow a life cycle approach to nutrition that addresses women’s nutrition during pregnancy and lactation, optimal IYCF (breastfeeding and complementary feeding), nutritional care of sick and malnourished children (including zinc, vitamin A and ready to use therapeutic foods), and the control of anemia, vitamin A and iodine deficiencies. The seven essential nutrition actions are:

1. Promotion of optimal nutrition for women
2. Promotion of adequate intake of iron and folic acid and prevention and control of anemia for women and children
3. Promotion of adequate intake of iodine by all members of the household
4. Promotion of optimal breastfeeding during the first six months
5. Promotion of optimal complementary feeding starting at 6 months with continued breastfeeding to 2 years of age and beyond
6. Promotion of optimal nutritional care of sick and severely malnourished children
7. Prevention of vitamin A deficiency in women and children

Nutrition-specific interventions

address the immediate causes of undernutrition, like inadequate dietary intake and some of the underlying causes like feeding practices and access to food.

Nutrition-sensitive interventions

can address some of the underlying and basic causes of malnutrition by incorporating nutrition goals and actions from a wide range of sectors. They can also serve as delivery platforms for nutrition-specific interventions.

The **Essential Nutrition Actions (ENA) Framework** has evolved over the years. In 2010, an initial set of training and reference materials were developed by USAID partners to guide implementation of the Framework. In 2013, WHO updated ENA recommendations and stressed the importance of working beyond the health sector. At this time, the Essential Hygiene Actions (EHA) were introduced as inextricably linked to improved nutrition.

The term **Essential Hygiene Actions** has been embraced over the past several years. A 2014 revision updated the training, building on the ENA 2010 Training materials, keeping the overall format. In early 2015, under a USAID TOPS grant, several organizations updated the materials to include Essential Hygiene Actions while keeping the overall format of the earlier materials, along with other changes. *Detailed acknowledgement of the various iterations of the framework, training and reference materials are found in the acknowledgement section at the front of this resource.*

The addition of EHAs to the ENA Framework highlight the vital contribution of water, sanitation and hygiene or WASH to child growth. While described in the revised framework and ENA/EHA materials quite comprehensively to include many aspects of WASH, the 2015 ENA/EHA training and resource materials still focus predominantly on ENAs, providing limited reference and resources that focus on handwashing and safely treating drinking water, and dedicating just a half hour of the two-day training community worker training to WASH.

These **Essential WASH materials** further elaborate the EHAs to facilitate integrating them effectively into nutrition-sensitive nutrition and food security programming, as well as facilitating ‘behavior-centered’ approaches within standalone WASH initiatives.

A first step to signal the expanding the focus from hygiene to more comprehensive water, sanitation and hygiene actions is a change of name from Essential Hygiene Actions to Essential WASH Actions. The EWAs and expanded WASH reference and training materials have been developed through a collaborative stakeholder process involving key actors from both the WASH and nutrition sectors over the course of a year. Participants are listed at the end of this section. They have been vetted and tested in field settings in South Asia and East Africa, as well as reflecting the experience of seasoned practitioners.

The Essential Actions and related behaviors reflect the current evidence-base relating to risk of exposure to fecal and other pathogens affecting child growth, as well as the evaluation literature on best practice interventions to reduce infant and young child exposure to pathogens. An important note on the final EWA is that the evidence base is not yet established for best practice programming to separate young children from animal, soil and animal feces. The recommendations are based on presumed effectiveness and plausibility based on consultation with area technical specialist and practitioners. Key studies are currently underway to strengthen the evidence.

Materials intentionally parallel the Essential Nutrition Actions and Essential Hygiene Action support materials, specifically a set of Reference Materials on Key Practices for two specific audiences: Community Workers and Health Workers and Nutrition Managers. The latter are brief reference sheets however more text-heavy and evidence-laden, while the community worker materials are a set of practical job aids designed for lower literacy community workers to use in various outreach and counseling settings. They draw from recent USAID WASH Projects in a range of country settings, and were not re-designed for a generic look. The authors assume these job aids might be revised and customized for use in varying contexts, drawing on the key approaches and messaging embedded in each job aid.

Training materials on each of the Essential WASH Actions are also part of the expanded EWA package. They are organized as one-hour supplementary modules to be used in conjunction with the ENA/EHA training materials. Unlike the ENA/EHA training materials, only one set of training materials was developed for both Community Workers and Health Workers and Nutrition Managers. Like the ENA/EHA materials, the resource materials are color-coded with purple for Health Workers and Nutrition Managers, and teal blue for Community Workers.

Additional information and links to downloads of the latest ENA/EHA materials can be found at the end of this section.

Introduction

Essential WASH Actions (EWAs) are practices that contribute significantly to disease reduction and improved health outcomes.ⁱ For households with children under 5, performing Essential WASH Actions contribute significantly to their children realizing optimum growth and development. We call them essential because based on available research, these have the greatest potential to break the cycle of undernutrition and diarrhea, reduce environmental enteric dysfunction^{ii (2)}, and promote child growth and development. Consistent and correct practice of key water, sanitation, and hygiene (WASH) actions are necessary for child growth and development, as well as for health and resiliency of communities. These basic, yet Essential WASH Actions serve to separate feces from the environment, which has in turn been proven to reduce diarrhea. Open defecation and lack of hygiene are directly linked to diarrhea and child stunting.

ⁱ Menstrual hygiene management is not included in this set of Essential WASH Action. Although menstrual hygiene is clearly essential to a comprehensive WASH initiative, these EWAs are designed to complement the Essential Nutrition Actions (ENAs) and are linked to improved nutrition and growth outcomes for children.

ⁱⁱ Environmental enteric dysfunction is a condition of the small intestine that inhibits permeability and nutrient absorption, has been identified as a potential mediating factor between poor WASH conditions leading to fecal ingestion and chronic undernutrition. This condition is thought to explain the modest effect observed in reducing child stunting even with the most rigorous dietary interventions, independent of the effects of diarrhea, and it is believed to have an environmental cause.

This kit defines the optimal actions for communities and households relating to WASH practice. Below each action is a subset of related practices that consider what is feasible yet effective in resource-constrained settings. We acknowledge that each project team may need to define practices that are more immediately “doable” or feasible in their context, yet effective at reducing exposure to harmful feces, and work in stages toward optimal practices.

Existing Evidence Justifies Integration of WASH Actions

Inadequate access to clean water and unsafe sanitation and hygiene practices increase the risk of severe infectious diseases that can contribute to undernutrition.³ New research is underway to further document and expand the evidence base for the connection between water, sanitation, and hygiene (WASH) and undernutrition. Existing research suggests three key pathways by which lack of WASH access and practice contribute to undernutrition.⁴

1. Repeated bouts of diarrhea

A vicious cycle exists between diarrhea and undernutrition: children with diarrhea eat less and are less able to absorb the nutrients from their food; malnourished children are more susceptible to diarrhea when exposed to fecal material from their environment.

2. Intestinal worm infection and malaria

Poor environmental hygiene, including open defecation, propagates the vectors for both intestinal worms and malaria. Worms can affect nutritional status by competing for nutrients and inducing intestinal bleeding, and like malaria, can cause frequent anemia and diarrhea.

3. Environmental enteric dysfunction hypothesis

Environmental enteric dysfunction (EED), also called environmental enteropathy, is a chronic disease caused by constant fecal-oral contamination. The intestinal villi flatten, thus reducing their capacity for nutrient absorption, and the small intestinal lining becomes chronically inflamed. In addition, EED is marked by increased gut permeability leading to a disturbed gut immune function. Thus, it is hypothesized that a body experiencing EED cannot absorb nutrients because it is too busy fighting off diseases.⁵ EED may help explain why purely nutritional interventions have failed to reduce undernutrition in many contexts.^{6,7}

Development programming often focuses on a single issue, such as WASH or nutrition, to target resources and maximize returns on investments that can be more directly measured by defined goals, objectives, and single-focus indicators. However, this type of programming does not foster solutions to address the complex problems faced by the poor and vulnerable, and often promotes competition for scarce funding resources.

Reduced Diarrheal Disease

A significant proportion of diarrheal diseases could be prevented by integrating WASH approaches (e.g., sanitation promotion, treatment and safe storage of drinking water, and handwashing with soap) into existing nutrition and child health. “Diarrhea” is many

things, and some diarrheagenic pathogens may cause other serious outcomes (e.g., campylobacteriosis can lead to Guillian Barré syndrome). In addition to diarrhea, countless other diseases and opportunistic infections, including toxoplasmosis, parasites, non-TB mycobacterial infection, trachoma, Rotavirus, etc.) can be prevented or minimized with safe water, sanitation, and hygiene promotion. Links provided at the end of this brief elaborate the evidence base. In short:

Latrines can reduce diarrheal disease by a third: Safe feces handling and disposal has been shown to reduce the risk of diarrheal disease by 30 percent or more⁸.

Handwashing can reduce diarrhea by 40%: Optimal handwashing prevents diarrhea effectively when done properly and at critical times. A meta-analysis of hand washing studies conducted in developing countries concluded that handwashing can reduce the risk of diarrhea in the general population by 42 percent to 44 percent⁹. Hands should be washed with soap before preparing food, before feeding a child or eating, after defecating, after cleaning a baby or changing a diaper, and after cleaning up the feces of a person who is chronically ill.

Treated drinking water can reduce diarrhea by a third: Treatment and safe storage of drinking water at the point of use has been shown to reduce the risk of diarrheal disease by 30 to 40 percent¹⁰. Evidence is now conclusive that simple, low-cost strategies for treating and safely storing water at the household level can greatly improve the microbial quality of water and result in diarrheal disease morbidity reductions comparable to those achieved by hand washing and safe feces handling and disposal¹¹.

Improved child physical health and growth

Emerging evidence is linking fecal ingestion with linear growth faltering, impaired child development and oral vaccine failure independent (or without overt signs of) diarrhea^{12,13} further strengthening the argument to include Essential WASH Actions into many programmatic hypothesis of change. This means even if a child isn't experiencing diarrhea, consistent fecal assault on the gut from ingesting human and/or animal feces either directly or through known pathways may be contributing to growth stunting that can affect a child's potential growth, learning and earning in their future. Environmental enteric dysfunction is thought to explain the modest effect observed in reducing child stunting even with the most rigorous dietary interventions, independent of the effects of diarrhea. Elimination of fecal ingestion can improve the outcomes of nutrition interventions by increasing nutrient absorption and increasing child

The concept of Essential WASH Actions is not new, and some institutions have identified Essential Hygiene Actions as part of their programming. Essential WASH Actions take this concept and apply it more comprehensively to the full set of safe water, safe disposal of feces, handwashing, food and animal hygiene behaviors contributing to health and growth.

appetite, resulting in improved growth measures in the short term, and improved growth, development, and learning in the long term.

Reduced stunting: Open defecation (or uncontained feces) is strongly linked to child growth, explaining 54 percent of the variation in child height (contrasting with country GDP, that explains only 29 percent of the variation in height¹⁴).

Therefore, improved WASH practice should be part of the “hypothesis of change” that serves as the foundation for nutrition interventions and other programs.

To support integration of improved WASH practices through a range of programming platforms, this document sets out to clearly state essential actions to incorporate into program planning as behavioral/outcome objectives. Essential actions can be applied to WASH specific programs, or integrated into nutrition, education, or other sectoral areas.

Essential WASH Actions guide behavior-centered programming, and should not be considered “messages”.

WASH Actions are optimal behaviors for which programs, interventions, infrastructure, community outreach, and other supports are needed to ensure adoption. Messages are one small part of the effort. Messages are crafted communications for particular audiences to be appealing, convincing, and motivating. The Essential WASH Actions below can be customized as messages for various audiences.

Learning from WASH Behavior Change Programming Shows Focusing on One or Two Behaviors Brings Change. Households Cannot Adopt and Practice All Ideal WASH Behaviors at Once.

People will more readily adopt one or a few behaviors at a time, particularly if the behaviors are considered feasible and socially acceptable from the point of view of the household. Programmers most often prioritize resource-constrained target households, so the WASH action targeted for improvement must be considered feasible within constrained settings from both a behavioral and also a practical viewpoint: *Does the target audience consider it feasible to carry out a proposed behavior change, considering their economic and social context, and considering their perception of resources available or potentially accessible to them?*

CHANGING WASH BEHAVIORS ONE SMALL DOABLE ACTION AT A TIME

A small doable action is a behavior that when practiced consistently and correctly, will lead to personal and public health improvement. It is considered feasible by the householder, from HIS/HER point of view, considering the current practice, the available resources, and the particular social context. Although the behavior may not be an “ideal practice,” more households likely will adopt it because it is considered feasible within the local context. (Note that we use the terms “behavior” and “practice” interchangeably in this brief.)

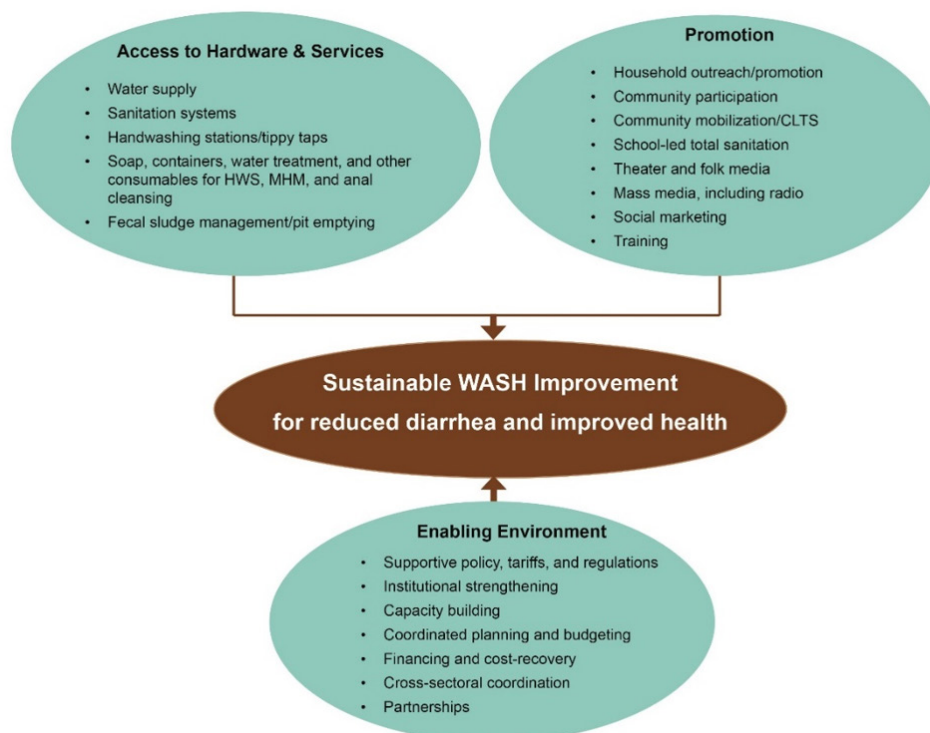
The behavior must also be effective, though it may not be ideal. Performance of the behavior must contribute to an improvement in a desired health outcome. These behaviors are referred to as “small doable actions.” We suggest selecting a limited number of Essential WASH Actions and behaviors to include in program strategies and plans.

EWA are intended for use in both programming planning and implementation. First, EWAs guide articulating a **hypothesis of change** and program planning, by helping to set a tangible behavioral objective for target activities. Once the behavior(s) to target is/are identified, then planners identify the factors influencing the practice of those target behaviors or EWAs.

Promotion is not enough. Improving WASH behavior often requires attention to the supply of enabling products and services, a supportive policy environment, and persuasive promotion. Improvement in EWAs requires comprehensive or at least coordinated programming that assures the interaction of all three domains—supply and services, enabling environment, and community and household promotion.

At the household level, essential WASH practices require at least a minimal level of products or services and promotion that solves problems and delivers a set of benefits. For washing hands, a household needs adequate quantities of water, which may be facilitated by a water-saving tippy tap. Residents need soap, or another acceptable cleansing agent like ash. They need key knowledge and skills around how and when to wash hands, as well as a supportive social environment including social norms that support hand washing at critical times.

The same EWAs can be targeted at community and household levels. They are also relevant at the institutional level (health center, hospital, school), but actions and messages may require reframing for relevance.



How to Use this Guide

Nutrition and food security specialists understand that nutrition sensitive interventions are necessary to improve the health and well-being of young children. Water, sanitation and hygiene (WASH) are important nutrition-sensitive interventions. While interest in WASH-nutrition integration has increased, more tools and programming guidance are needed to assist practitioners incorporate WASH into nutrition and food security programming.

The term Essential Hygiene Actions has been used recently and incorporated into TOPS and other reference manuals and training guides, referring to the range of nutrition-sensitive WASH actions. This toolkit offers a more comprehensive set of Essential WASH Actions, reference materials for health workers, nutrition managers and community workers, and training materials to build capacity of all cohorts to promote the EWAs in an outreach and discussion context.

This set of Essential WASH Actions clearly outlines **five essential actions** and a set of accompanying behaviors needed to support the Essential Nutrition Actions.

The complete set of five WASH-sensitive actions include:

1. Safe disposal of human feces through latrine use and promoting “open defecation- free communities”.
2. Wash hands with soap at critical times
3. Safe storage and treatment of household drinking water
4. Hygienic handling and safe storage of food (food hygiene)
5. Separating infants and young children from consuming soil and animal feces.

The full set of EWAs and behaviors are found at the end of this section.

- These materials are meant to supplement the existing ENA/EHA materials with specific information and instructions for negotiating improved WASH behaviors with household members who care for young children.
- They are not designed as ‘stand-alone’ materials, and depend upon the full set of ENA materials to provide context and specific training on negotiating improved practice through counseling and communication.
- When implementing the ENA Training, managers are encouraged to evaluate whether to ADD the Essential WASH Actions, or substitute what exists with the new material.
- The placement within the larger training can stay the same, but facilitators should note that the Essential WASH Actions require an additional 6 training hours (not including breaks or lunch) or the equivalent of an entire day to complete.

The **Reference Materials for Health and Nutrition Workers** describe the five Essential WASH Actions and outline the priority behaviors needed to achieve these actions. These references seek to inform health and nutrition workers about WHAT to do and WHY. This set of materials is more text dense and information-based.

The **Reference Materials for Community Workers** are a series of job aids that community workers can use to negotiate improved practices for each essential action, using the promotion and communication skills included in the ENA materials. These materials can help direct behavior-focused outreach with caregivers about how to improve their WASH practices.

The **Training Materials for Health, Nutrition and Community Workers** are training modules to build competencies, demonstrating WHAT community workers can do to promote small doable actions in the community to keep young children healthy. The exercises are modular and can be incorporated into any existing ENA/EHA training. Each session is limited to a maximum of 60 minute so that they can be easily integrated into an ENA training. These EWA training materials do NOT include competencies to engage with households and negotiate improved behaviors, with the assumption that training in EWA competencies will be linked to the more comprehensive ENA training.

Like the ENA/EHA materials, they are color-coded with purple for Health Workers and Nutrition Managers, and teal blue for Community Workers. The lime green materials are intended for both audiences.

| Essential HYGIENE Actions | Time | Essential WASH Actions | Time |
|--|------------|---|---------|
| Training for Health Workers and Nutrition Managers Session 11: Essential Hygiene Actions –pp 47-51 of April 2015 Edition | 75 minutes | Training Guide for Community Workers, Nutrition Managers and Health Workers (One unified guide) | 6 hours |
| Training Guide for Community Workers Session 7- Essential Hygiene Actions – p. 49 of April 2015 Edition | 30 minutes | | |
| Reference Materials for Nutrition Managers and Health Workers Document 22, 23 and 24 | | Reference Materials for Nutrition Managers and Health Workers One on each Essential WASH Action | |
| Reference Materials for Community Workers pp 27-31 of April 2015 Edition Practice 17: Keeping the Environment Clean Practice 18: Hand washing Practice 19: Washing a Child’s Hands before Feeding Practice 20: Wash Your Hands Easily Using Minimum Water Practice 21: Keeping Food and Food Containers Clean | | Reference Materials for Community Workers (also intended for Nutrition Managers and Health Workers use) 17 job aids | |

Essential WASH Actions *(with associated behaviors)*

■ Safe Disposal of Human Feces

- Consistently use improved latrines, including child-friendly latrines and accessible latrines, to encourage all household members to use them. Place all human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child (IYC) feces, with intermediary steps like diapers or potties, so all feces end up in latrines.
- Fling any wash water used for cleaning children's bottoms, diaper material, and potties to disperse it, away from well sites and away from children's play areas.
- Promote universal latrine use in the community. Participate in efforts to make the community an "open defecation-free community".

■ Wash Hands With Soap

- Install two dedicated hand washing stations with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and 10 paces from the latrine. Designate responsibility within the family to make sure they are maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children.
- Wash hands with soap and water after using the latrine/toilet and after cleaning a child's feces; after handling animals or dung or working in the field. Wash young child's hands regularly, especially when visibly dirty and before each meal.

■ Safe Storage & Treatment of Household Drinking Water

- Collect drinking water from the safest, protected source available.
- Treat drinking water with an effective treatment method.
- Store drinking water in a covered container and raised off the floor. If possible, use a container with a spigot or tap, a narrow opening or narrow neck to protect the water by encouraging pouring, and restricting hands from entering.
- Extract water by pouring into a cup or vessel. If no tap, use a dedicated ladle/dipper that hangs on the wall.
- Drink from a clean cup.
- If treated water is limited, prioritize giving safe water to children under 2, the elderly, pregnant and nursing mothers, and sick householders.

■ Hygienic Handling & Safe Storage of Food (Food Hygiene)

- Cook and reheat all hot food until boiling or steaming throughout.
- Do not eat food that has been sitting at room temperature without reheating until boiling or steaming.
- Dispose of all food that smells or looks spoiled.
- Store food in the cleanest and coolest location possible, out of the sun. Cover all stored food from flies and animals.
- Wash foods to be eaten raw with treated water, and prepare these foods on freshly washed surface with clean utensils.
- Wash cooking and serving containers and utensils before use, with flowing water* and soap.

■ Separating Children From Soil and Animal Feces**

- Separate children from animal feces, keeping a physical barrier as possible between IYC and animals and their feces.
- If using a playmat, clean and sanitize weekly or whenever visible dirt or feces.
- Separate livestock/domestic animals and their feces from cooking and sleeping areas, and where young children are commonly on the ground.
- Sweep household compound daily or whenever feces are visible to keep animal feces out of the indoor and outdoor living areas.
- Place any animal feces that will be used as fuel, fertilizer or building material into a raised area or deep pit, covered and away from the reach of IYC and flies.
- Place animal feces with no future use in latrine or isolated rubbish pit.
- Wash IYC toys and playmat weekly or when feces or dirt are visible.

*Flowing water can run or be poured from a tap, pitcher, cup, or jug. The key action is to have water rinse over hands or food. Dipping into still water is never acceptable for washing.

**Note the evidence base for effective means of reducing child exposure to animal feces and soil is not yet established and the recommended behaviors are based on consultation with area experts, available data and biologic and behavioral plausibility.

Below is a brief description of the existing ENA/EHA materials. Downloads of the latest ENA/EHA materials can be found at:

- <http://www.fsnnetwork.org/essential-nutrition-actions-and-essential-hygiene-actions-framework>
- <http://blogs.washplus.org/washnutrition/2015/06/usaids-essential-nutrition-actions-and-essential-hygiene-actions-framework-2015/index.html>

| ENA Training Materials | |
|--|---|
| | <p>The Essential Nutrition Actions and Essential Hygiene Actions Training Guide: Health Workers and Nutrition Managers introduces health professionals to the most up-to-date hygiene and nutrition information, and how to deliver nutrition through health visits. The training guide applies a participatory approach, reflecting the considerable evidence that adults learn best by practicing and reflecting on their experiences. It thus emphasizes exercises to improve skills in counseling that support clients to adopt optimal nutrition practices. Women's nutrition and infant feeding in the context of HIV are also addressed. Guidelines to link the prevention of malnutrition with treatment via the Integrated Management of Acute Malnutrition are also included. It can also be conducted with nutrition managers to equip them to provide supportive supervision to health and community workers.</p> |
| <p>The Essential Nutrition Actions and Essential Hygiene Actions Reference Manual: Health Workers and Nutrition Managers accompanies the aforementioned training manual and contains reference information such as UNICEF's conceptual framework, contact points at which to deliver essential nutrition actions and essential hygiene actions, technical guidance on adolescent and women's nutrition, family planning, infant and young child feeding, nutrition in the context of HIV, strategies for improving hygiene and sanitation, protocols for prevention of micronutrient deficiencies, integrated management of acute malnutrition, guidelines for counseling and negotiation with mother and caregivers, guidelines for facilitating community support groups, and checklists for conducting supportive supervision at community level. The information is intended to improve health worker performance in the delivery of appropriate services and counseling at each consultation.</p> | |
| | <p>The Essential Nutrition Actions and Essential Hygiene Actions Training Guide: Community Workers strengthens the capacity of community workers to deliver and promote the essential nutrition and hygiene actions. It introduces technical content within hands-on sessions to practice counseling and negotiation, using role plays and field practice. It guides community workers in understanding why and how to integrate messages on nutrition and hygiene into their different program platforms using a life cycle approach to deliver the right message to right person at the right time.</p> |
| <p>The Essential Nutrition Actions and Essential Hygiene Actions Reference Materials on Key Practices: Community Workers accompanies the Community Worker training as a job aid, covering key concepts for each of the nutrition and hygiene practices as well as some ideas on how Homestead Food production (HFP) can be developed to improve household dietary quality and diversity. The reference book:</p> <ul style="list-style-type: none"> • Provides illustrations with background information to help Community Workers explain how the recommended practices improve the nutrition and health of women and children. • Gives simple tips on how to promote optimal behaviors with mothers, husbands, mothers-in-law, caregivers, and other household members. • Provides discussion topics for counseling sessions and group meetings. | |
| <p>DOWNLOAD ALL MATERIALS AT WWW.COREGROUP.ORG/ENAEHA.</p> | |



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¹ This introduction pulls directly from *Understanding the Essential Nutrition Actions and Essential Hygiene Actions Framework* [http://www.fsnnetwork.org/sites/default/files/Understanding the Essential Nutrition Actions and Essential Hygiene Actions Framework.pdf](http://www.fsnnetwork.org/sites/default/files/Understanding%20the%20Essential%20Nutrition%20Actions%20and%20Essential%20Hygiene%20Actions%20Framework.pdf).

² Prendergast AJ, Humphrey JH. The stunting syndrome in developing countries. *Paediatr Int Child Health* 2014; 34:250–65.

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⁵ Korpe and Petri. 2012. Environmental Enteropathy: Critical Implications of a Poorly Understood Condition. *Trends in Molecular Medicine*. 18(6): 328-336.

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¹² Prendergast AJ, Humphrey JH. The stunting syndrome in developing countries. *Paediatr Int Child Health* 2014; 34:250–65.

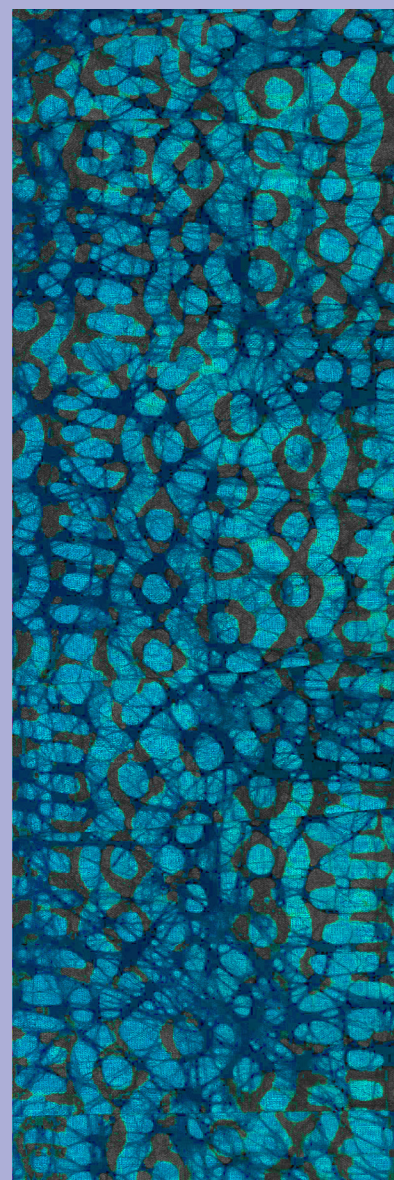
¹³ Korpe PS, Petri WA Jr. Environmental enteropathy: critical implications of a poorly understood condition. *Trends Mol Med* 2012; 18:328–36

¹⁴ Spears D, Ghosh A, Cumming O (2013). Open defecation and childhood stunting in India: an ecological analysis of new data from 112 districts. *PLoS One*. 8(9):e73784. doi:10.1371/journal.pone.0073784.

ESSENTIAL WASH ACTIONS REFERENCE MANUAL:

Health Worker and Nutrition Manager

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How to Use this Guide

Nutrition and food security specialists understand that nutrition-sensitive interventions are necessary to improve the health and well-being of young children. Water, sanitation and hygiene (WASH) are important nutrition-sensitive interventions. While interest in WASH-nutrition integration has increased, more tools and programming guidance are needed to assist practitioners incorporate WASH into nutrition and food security programming.

The term Essential Hygiene Actions has been used recently and incorporated into TOPS and other reference manuals and training guides, but a more careful look at these materials shows that the actions focus on handwashing, using a handwashing device to facilitate handwashing, and keeping containers and the environment clean. In the 2015 *Essential Nutrition Actions/ Essential Hygiene Actions* materials published by the USAID TOPS Program included one-half hour for hygiene actions in the three-day training.

This toolkit offers a more comprehensive set of Essential WASH Actions, reference materials for health workers, nutrition managers and community workers, and training materials to build capacity of all cohorts to promote the EWA in an outreach and discussion context.

The complete set of **five Essential WASH Actions** include:

SAFE DISPOSAL OF HUMAN FECES

WASH HANDS WITH SOAP

SAFE STORAGE & TREATMENT OF HOUSEHOLD DRINKING WATER

HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES

Nutrition-specific interventions

address the immediate causes of undernutrition, like inadequate dietary intake and some of the underlying causes like feeding practices and access to food.

Nutrition-sensitive interventions

can address some of the underlying and basic causes of malnutrition by incorporating nutrition goals and actions from a wide range of sectors. They can also serve as delivery platforms for nutrition-specific interventions.

This set of **Essential WASH Actions clearly outlines 5 essential actions** and a set of accompanying behaviors needed to support the Essential Nutrition Actions. These materials are meant to supplement the existing materials with specific information and instructions for negotiating improved WASH behaviors with household members who care for young children.

The **Reference Materials for Health and Nutrition Workers** identify the five Essential WASH Actions and outline the behaviors needed to achieve these actions. This information seeks to inform health and nutrition workers about WHAT to do and WHY. This set of materials is more text dense and information-based.

The **Reference Materials for Community Workers** are a series of job aids that community workers can use to negotiate improved practices for each essential action. These materials show community workers HOW to talk to caregivers about HOW to improve their practices.

The **Training Materials for Health, Nutrition and Community Workers** are activities that demonstrate WHAT to do to keep family members healthy and WHY. The exercises are modular and can be incorporated into any existing ENA/EHA training. The activities associated with each action are limited to a maximum of 60 minute sessions so that they can be easily added to an ENA training. These EWA training materials do NOT include competencies to engage with households and negotiate improved behaviors, with the assumption that training in EWA competencies will be linked to the more comprehensive ENA training.

The training materials are not designed as a “training of trainers”, nor are the exercises designed for community members, although some might be adapted for use in group sessions. These learning activities are designed to build the knowledge and skills of community outreach workers, nutrition managers and health workers in improving WASH behaviors in the home and community.

Essential WASH Actions *(with associated behaviors)*

SAFE DISPOSAL OF HUMAN FECES

- Consistently use improved latrines, including child-friendly latrines and accessible latrines, to encourage all household members to use them. Place all human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child (IYC) feces, with intermediary steps like diapers or potties, so all feces end up in latrines.
- Fling any wash water used for cleaning children's bottoms, diaper material, and potties to disperse it, away from well sites and away from children's play areas.
- Promote universal latrine use in the community. Participate in efforts to make the community an "open defecation-free community".

WASH HANDS WITH SOAP

- Install two dedicated hand washing stations with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and 10 paces from the latrine. Designate responsibility within the family to make sure they are maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children.
- Wash hands with soap and water after using the latrine/toilet and after cleaning a child's feces; after handling animals or dung or working in the field. Wash young child's hands regularly, especially when visibly dirty and before each meal.

SAFE STORAGE & TREATMENT OF HOUSEHOLD DRINKING WATER

- Collect drinking water from the safest, protected source available.
- Treat drinking water with an effective treatment method.
- Store drinking water in a covered container and raised off the floor. If possible, use a container with a spigot or tap, a narrow opening or narrow neck to protect the water by encouraging pouring, and restricting hands from entering.
- Extract water by pouring into a cup or vessel. If no tap, use a dedicated ladle/dipper that hangs on the wall.
- Drink from a clean cup.
- If treated water is limited, prioritize giving safe water to children under 2, the elderly, pregnant and nursing mothers, and sick householders.

HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

- Cook and reheat all hot food until boiling or steaming throughout.
- Do not eat food that has been sitting at room temperature without reheating until boiling or steaming.
- Dispose of all food that smells or looks spoiled.
- Store food in the cleanest and coolest location possible, out of the sun. Cover all stored food from flies and animals.
- Wash foods to be eaten raw with treated water, and prepare these foods on freshly washed surface with clean utensils.
- Wash cooking and serving containers and utensils before use, with flowing water* and soap.

SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES**

- Separate children from animal feces, keeping a physical barrier as possible between IYC and animals and their feces.
- If using a playmat, clean and sanitize weekly or whenever visible dirt or feces.
- Separate livestock/domestic animals and their feces from cooking and sleeping areas, and where young children are commonly on the ground.
- Sweep household compound daily or whenever feces are visible to keep animal feces out of the indoor and outdoor living areas.
- Place any animal feces that will be used as fuel, fertilizer or building material into a raised area or deep pit, covered and away from the reach of IYC and flies.
- Place animal feces with no future use in latrine or isolated rubbish pit.
- Wash IYC toys and playmat weekly or when feces or dirt are visible.

*Flowing water can run or be poured from a tap, pitcher, cup, or jug. The key actions is to have water rinse over hands or food. Dipping into still water is never acceptable for washing.

** Note the evidence base for effective means of reducing child exposure to animal feces and soil is not yet established and the recommended behaviors are based on consultation with area experts, available data and biologic and behavioral plausibility.

Safe Disposal of Human Feces

Document A: Safe Disposal of Human Feces

The diagram below shows the many ways by which feces get into the mouth: through fluids, fields/feet, flies, food,, and fingers. We call these the F routes of contamination. Don't be concerned if the words don't translate into "F" words in your local language. It can just be called the 'contamination cycle'. Each route has a corresponding barrier, shown in red, to block fecal germs from getting into food and into a person's mouth. When feces work their way into our water and food, it has a negative effect on child health and growth. Below are the actions to promote for this EWA.

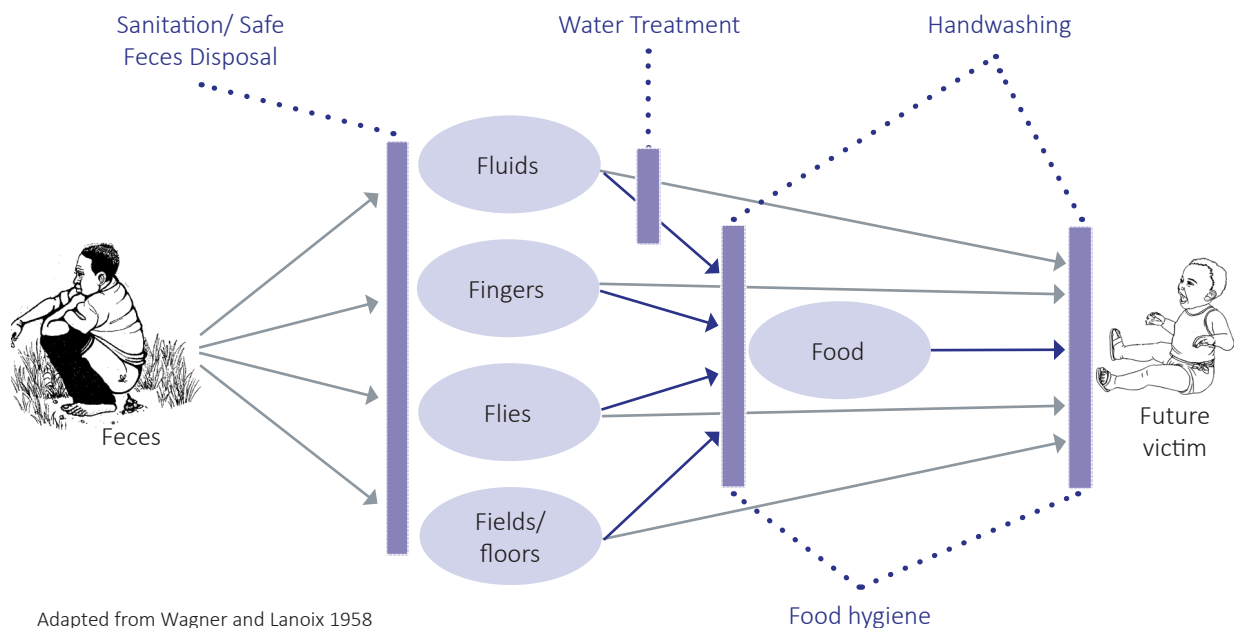
Consistently use improved latrines. Place any human feces directly into the household latrine.

Always defecate in a hygienic latrine that meets these minimum standards:

- cleanable platform
- cover over the pit
- housing that provides privacy
- hand washing station ideally located next to the latrine

Modify latrines for children and people with limited mobility so that using a latrine is possible and accessible to all. The modifications may require a smaller hole or building supports (poles, ropes, stools, etc.) for children or elderly/weak household members to feel

Blocking the Contamination Cycle (Using the EWAs to Block the Cycle)/





comfortable using the latrine or providing simple commodes to place over the latrine pit or potties. See Job Aid #3 for making latrines child-friendly.

If a latrine is not available, consider sharing a latrine with others in the community. Bury feces away from the house or facility ONLY if there is NO other option.

Maintain latrines properly by clearing the path to the latrine, removing obstacles such as stones and branches, and filling holes in the path to facilitate easier access. Keep the platform, seat, walls, or other surface of the latrine clean of feces by cleaning at few times a week, or whenever feces is visible.. Place all anal cleansing materials into the latrine itself. A scoop of lime or ash placed in the latrine after defecation can reduce odors and deter flies.

Practice age appropriate actions for safely disposing of child feces.

Safely dispose of infant and child feces. This action may require using intermediary steps, such as using diapers or potties to make sure feces are thrown in the latrine, and contaminated wash water is separated from the well site.

Work toward an “open defecation-free community,” where everyone uses latrines all the time.

When all households in a community have access to and use a latrine, then everyone in the community will benefit from fewer illnesses, because feces are not easily spread around the community, dirtying everyone’s food and water.

Who should use a latrine?

Everyone over 5 years of age.

Young children (3-5 years old) should use the latrine or defecate in a fixed place, such as a potty. Caregivers should dispose of the feces in the latrine.

Infants can use a diaper or potty or home-designed feces collection device, such as a ceramic pot lined with ash. Caregivers should dispose of the feces in the latrine.

Handwashing with Soap

Document B: WASH HANDS WITH SOAP

Washing hands is an essential action to reduce the risk of diarrhea, which contributes to undernutrition, growth stunting, and even death. The box to the right illustrates the most important times for caregivers to WASH hands.

In addition, caregivers should wash children's hands often, especially before each meal. Washing children's hands keeps them free from germs, but also help children form a habit for hand washing.

In addition to promoting WHEN to wash hands, teach community members HOW to wash hands properly. We take this for granted, but many people simply rinse their hands and don't do a complete and proper rub with soap to rid the hand of germs. Often, people focus on rinsing just one hand, and give far less attention to the other. It is vital to wash both hands consistently and correctly with soap.

Effective handwashing uses flowing water and soap.

Hand Washing Tips

- Untreated water can be used for washing hands, as long as it is flowing.
- Never use a dip method to wash hands. The flowing water rinses the germs away from the hands.
- Soap is best for cleaning, but if unavailable, ash or sand are acceptable substitutes. It is the friction from rubbing that helps to loosen the dirt and germs, which are then rinsed off the hands with flowing water.

WHEN to Wash Hands

- Before preparing food or cooking
- Before eating or feeding a child
- After defecation
- After cleaning a child's bottom
- After handling animals or dung or working in the fields

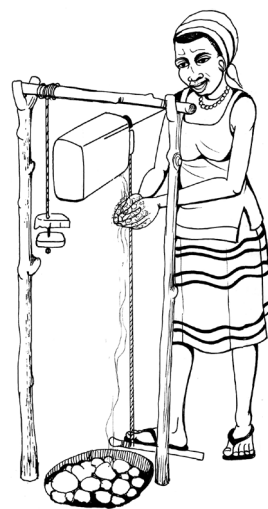
HOW to Wash Hands Properly

- Wet hands and rub with soap (or ash or dirt/mud)
- Rub palms together
- Interlock finger webs and rub together
- Rub each palm against the back of the opposite hand
- Rub each palm over knuckles and finger tips on the opposite hand
- Rub each thumb
- Rub around the wrist
- Rinse hands with water
- Dry hands by waving them in the air. (Towel and clothing are often full of contamination.)

Creating a Simple Handwashing Station

If piped water is not available, create a simple handwashing station with household items to ensure flowing water is easily available for washing hands. This home-made station is called a tippy tap. When placed in areas where hand washing is required, the tippy tap reminds people to wash their hands and helps people form the habit of handwashing. A tippy tap also uses less water than other methods of pouring.

Setting up a hand washing station in the kitchen or food preparation area will remind caregivers to wash hands before preparing food. Setting up a tippy tap outside the latrine reminds people to wash hands after visiting the toilet.



Treatment and Safe Storage of Drinking Water

Document C: Safe Storage and Treatment of Household Drinking Water

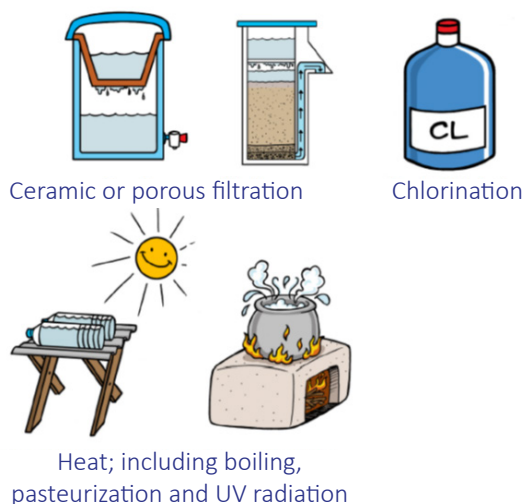
Having safe water to drink reduces the risk of diarrhea and other illnesses. This EWA includes safe collection, transport, and storage of drinking water, and the treatment of water to make it safer to drink.

Collect drinking water from a safe protected source

Ideally, communities will have access to an improved water source, such as a covered well or borehole where the water is pumped directly from deep in the ground. But community members collect water wherever they can, and these sources may be open and unprotected. Water from these sources is often not safe to drink. Often even piped water has gotten contaminated along the way to the tap so is not safe to drink. Water transported from the source to the point of use can also become contaminated.

Household water treatment and storage technologies are methods to treat, store, and serve water where improved piped water sources are not available right in the household, and where water must be collected and transported to the home.

Proven HWTS Methods



Steps for Safe Drinking Water

Treat drinking water with an effective method

The water treatment methods that have been proven to significantly improve drinking-water quality include filtration, chemical disinfection, disinfection with heat (boiling, pasteurization), and flocculants/disinfectants.

Identify methods that are appropriate and available to your community and work with trusted local community educators to encourage appropriate water treatment practices. The most appropriate treatment method for a particular location is highly contextual and depends on a number of interconnected factors. Methods need to be easily available and affordable to households, and effective given the water treatment needs. Consult with a local WASH project to think through the considerations.

Store drinking water in a covered, narrow neck container raised off the floor

Storing treated water properly is critical to keeping the water safe. Whatever type of container is used, keep hands away from the mouth of the container and off the dipper, and store the container on a shelf away from small children and animals. Drink watering water containers should be covered and raised off the floor. Treated water should be properly stored as described below.

Store water in a closed container with a tap or spigot. If not available, use a container with a narrow neck that is covered

A covered container with a tap is the ideal option. A narrow neck also will prevent hands from contaminating the water. If such a container is not available, dippers can be substituted for the tap. Store dippers or pitchers off the floor and away from children.

Extract water by pouring; use a dedicated ladle/dipper that hangs on the wall

Pour into a jug or directly into a clean cup. Never touch the water with hands.

Always drink from a clean cup***Prioritize who drinks the treated water, if there is not enough for everyone***

If treated drinking water is limited, give it first to members of the household who are most at risk for getting ill, such as children under age 5, the elderly, pregnant and lactating women, or members who are already sick..

Clean water storage containers and utensils

Reduce contamination through cleaning regularly, at least once a week. It helps to set a 'cleaning day', the same day each week. If available, add a small bit of bleach or soap to the container, shake, then rinse the container. You do not need to use treated water to rinse containers. Never use hands and a rag to clean the INSIDE of a container; it is fine to clean the outside with a rag.

Clean pouring or serving utensils with soap and water and dry on racks that do not touch the ground.

Food Hygiene

Document D: Food Hygiene

Many different germs can find their way into food, causing vomiting, diarrhea, or more serious illness. Food preparation and feeding in an unclean manner increases food contamination and the risk of diarrhea and other illnesses. Risk of illness is especially high in young children under age 2, when food and water are introduced starting from six months.

Food can get contaminated by feces through all the F routes shown Document A, particularly unwashed hands, unsanitary cooking surfaces, and water used for cooking.

Food also can make people sick by serving as a 'vehicle' for germs. Bacteria, viruses and parasites traveling in food can cause a range of sickness. Sometime food simply carries the viruses or parasites, like a bus, and transports them into the mouth. Food also serves as a place where bacteria grow and multiply, and are then consumed. In all cases, proper hygiene can prevent or eliminate these dangerous parasites, bacteria, and viruses that make people sick, particularly young children.

When caregivers practice good hygiene their children are less likely to fall sick from contaminated food.

Food Preparation

- Cook and reheat all hot food until boiling or steaming throughout.
- Wash foods being eaten raw with treated water, and prepare on freshly washed surface with clean utensils.
- Wash hands before preparing food.



Food Storage

- Store cooked food in the coolest location possible, out of the sun and covered from flies and animals.
- Do not eat food that has not be thoroughly reheated to a boil or steaming throughout. Never eat food that looks or smells rotten.



Utensil Care

- Wash cooking and serving containers and utensils before using with flowing water and soap.
- Dry dishes on a rack or dedicated shelf out of reach of children and animals.

Separating Infants and Young Children from Soil and Animal Feces

Document E: Separate Infants and Young Children from Soil and Animal Feces*

Studies show that exposing young children to human and animal feces can harm their physical and mental growth. Even if a child does not get diarrhea, exposure can affect the body's ability to fight germs, the child becomes MORE open to diarrhea, and less able to absorb nutrients from foods.

Young children explore their environment through touching and tasting things. They also put their hands in their mouth often during the day, and those hands are often dirty. Children in various settings are observed putting dirt and soil into their mouths and as well as poultry feces and other objects in the household compound.



Households should follow these essential practices:**

Separate young children from animal feces.

Keeping children and animals apart can be difficult, as animals often graze freely for food. To keep children away from animal feces, animals can be penned, or children can be put in a protected area where animals cannot enter. The caretaker can monitor that protected space.

Before Crawling

- A dedicated mat provides a clean space for the baby to play safely and helps to keep the baby from eating soil and chicken feces that can make the baby sick. A play area provides a safe area for the child to play, sleep, and eat.
- Make sure to put only washable, baby-safe toys (that will not harm the baby or cause choking if swallowed) in the play area or on the baby's mat. A mat with bright colors and toys will help the child grow up to be healthy and smart.
- Clean the play area at least once a week or whenever it looks soiled with feces or dirt. Wash cloth mats or clean plastic mats by wiping with a clean cloth that has some bleach or soapy water on it.

After Crawling

- Ensure that the play area is big enough for the baby to have room to crawl and explore, and stay in the play area or on the mat.
- Make sure to place the area or mat away from fires, smoke, wells, or animals.

- Make sure the play area is always in a place where you can see the child at all times
- Make sure to put only washable, baby-safe toys (that will not harm the baby or cause choking if swallowed) in the play area or on the baby's mat. A mat with bright colors and toys will help the child grow up to be healthy and smart.
- Clean the play area at least once a week or whenever it looks soiled with feces or dirt. Wash cloth mats or clean plastic mats by wiping with a clean cloth that has some bleach or soapy water on it.

Sweep/Clean compound daily to keep animal feces out of the yard.

Sweeping the compound will remove animal and human feces that may be on the ground. Pay special attention to clear the compound of chicken feces, which are dangerous to babies and young children if consumed.

Place any animal feces to be used as fuel or fertilizer in a raised covered container or deep pit away from where the children might be.

Keep feces in a safe place away from children and animals so germs are not spread around the living area.

Place animal feces with no future use in the latrine or isolated rubbish pit.

Dispose of feces in an isolated and contained place, away from children and animals so germs are not spread around the living area.

Family members must ALWAYS monitor what a child is putting into his/her mouth. Stop children from eating soil or other objects they find.

- A very small amount of soil may contain large numbers of germs that the baby can ingest and make him/her sick. The soil that the child eats may contain human feces that comes from our shoes after going to the toilet, or feces from animals running around the yard, and other such sources. Sometimes the soil was soaked in water used to clean nappies.
- If a baby accidentally eats some soil, the baby should NOT be made to vomit. Wash the baby's hands with soap and water and place the baby on a mat to prevent the baby from eating any more soil.

*The material above draws significantly from: SHINE Trial WASH Intervention Modules 2014, developed by Zvitambo Institute for Maternal and Child Health Research, Harare, Zimbabwe

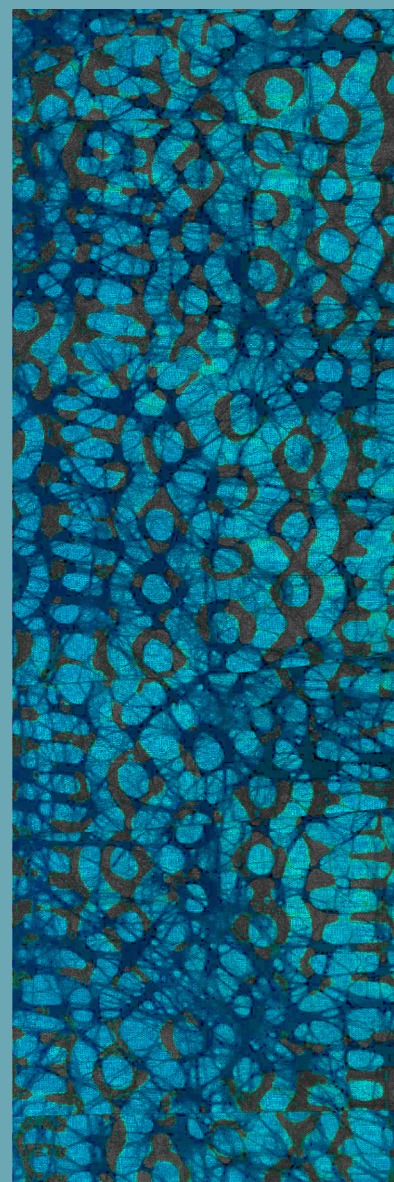
** The Essential Actions and related behaviors reflect the current evidence-base relating to risk of exposure to fecal and other pathogens affecting child growth, as well as the evaluation literature on best practice interventions to reduce infant and young child exposure to pathogens. An important note on the final EWA is that the evidence base is not yet established for best practice programming to separate young children from animal, soil and animal feces. The recommendations are based on presumed effectiveness and plausibility based on consultation with area technical specialists and practitioners. Key studies are currently underway to strengthen the evidence.

REFERENCE MANUAL:

Community Workers

Job Aids

This set of job aids is collected from various USAID programs around the globe to help community- and clinic-based workers negotiate the WASH EWAs.



Credits for Job Aids

These job aids draw extensively on job aids developed over the course of the USAID/ Hygiene Improvement Project and the USAID/WASHplus Project. In particular, these EWA materials feature job aids from the USAID/HIP and WASHplus Projects/ Uganda, produced with the GoU/Ministry of Health and Plan International; WASHplus /Kenya produced with the GoK/Ministry of Public Health & Sanitation and the USAID/C-CHANGE Project (FHI360). Supplementary jobs aids and drawings were graciously shared by the USAID/SPRING Project.

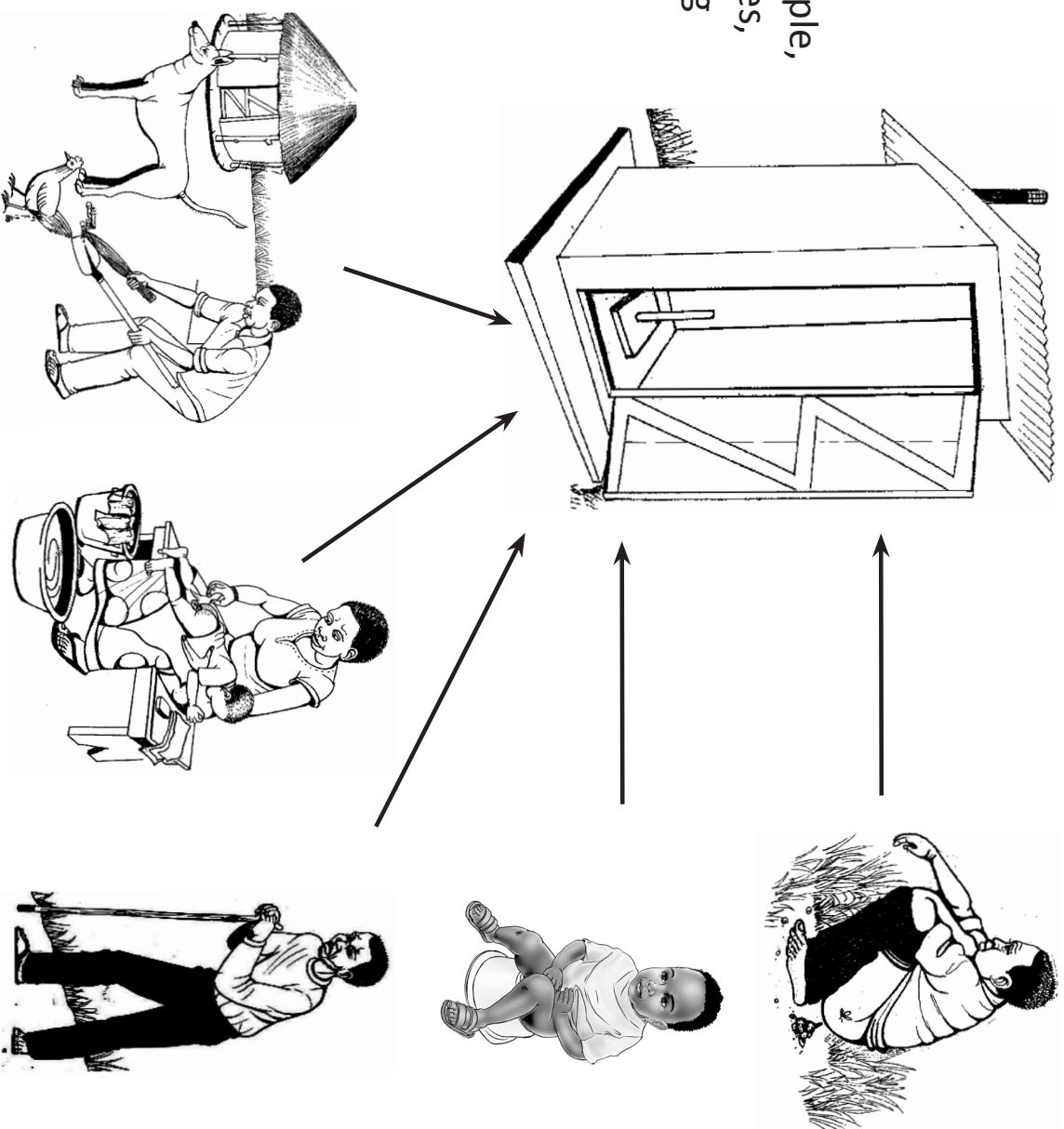
Materials have evolved from the USAID/Hygiene Improvement Project and the USAID/ WASHplus Project, particularly Uganda, Bangladesh, and Kenya activities. Phoebe Kasanga, Juliet Nandawula, Justin Igala and Paul Kasobya (Uganda), Evelyn Makena (Kenya) and M. Faruq Hussain (Bangladesh) merit acknowledgement for these efforts, in addition to a score of others.

Full credit for the job aids on Separating Infants and Young Children from Animal Feces and Soil goes to the USAID/SPRING Project, and the SHINE Study WASH Interactive Tools (2014) developed by Zvitambo Institute for Maternal and Child Health Research, Harare, Zimbabwe, for many of the ideas in about separating infants and young children from animal feces and soil.

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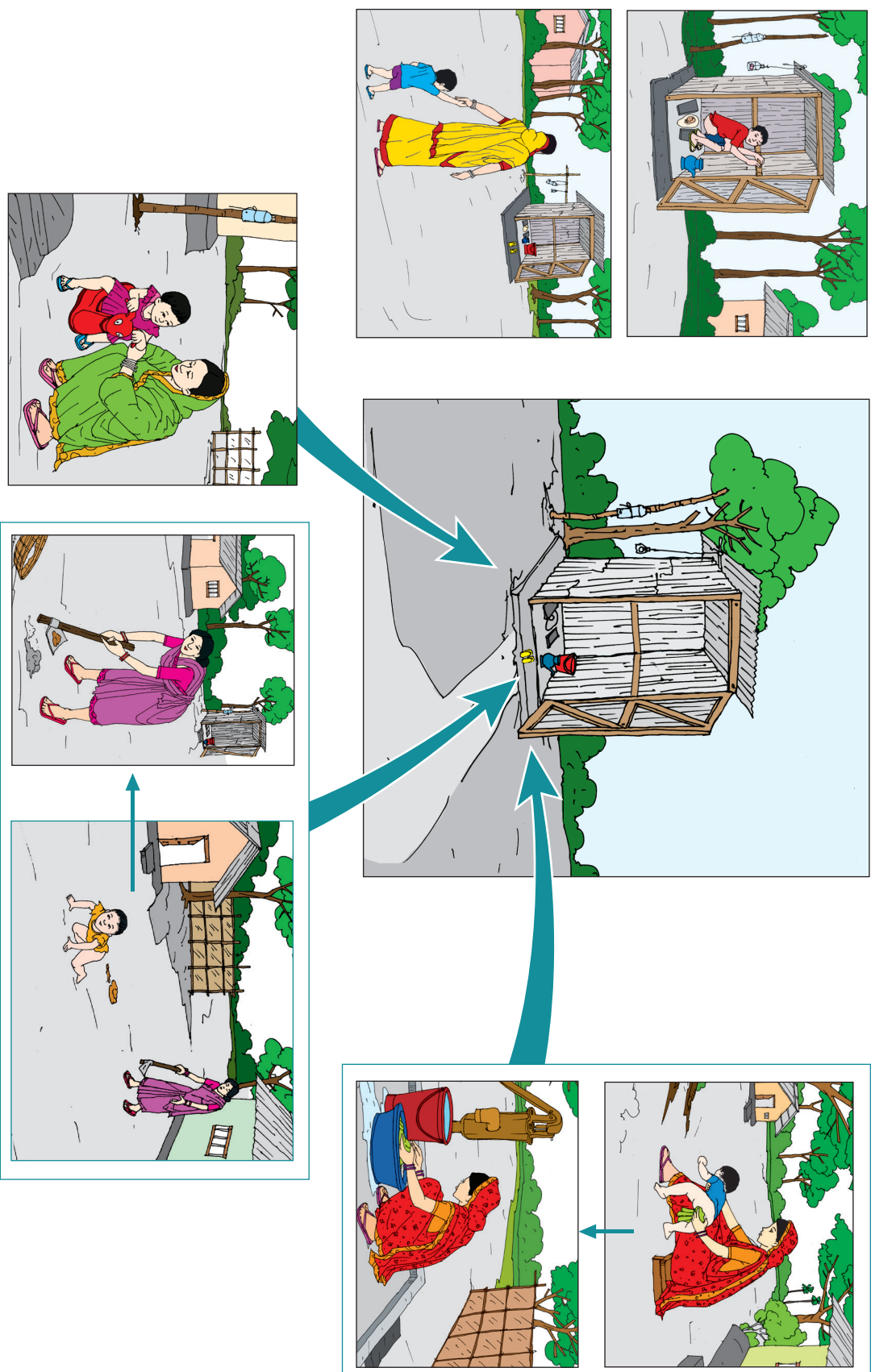
Put faeces of sick people, adults, children, babies, and animals (including birds) in a latrine.



Small Doable Actions For Disposal of Faeces: **What To Do with Infant Poo**

#2a

No matter where your young child poos, make it end up in the latrine!

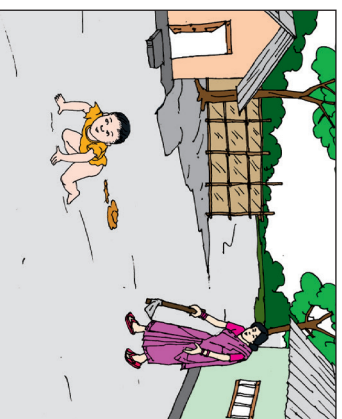


Assess current feces disposal practice by age, then negotiate one or two small doable actions to improve WASH practice... no matter what, the latrine is poo's final address



Milk baby 0 – 6 months

- Use soft cloth/diaper/katha to catch feces
- Dispose of feces from cloth/diaper/katha into waste pond or preferably into a latrine
- Put cloth/diaper/katha in a dedicated bowl for washing
- Wash a few collected cloth/nappies/katha by rinsing out feces, dumping filthy water into the latrine, contained drainage, or as last resort tossing away from tube-well/water sources
- If disposing of entire diaper, dispose into solid waste where animals cannot get at feces, bury or burn
- If you hold the infant to poo into courtyard or ground, follow up with a hoe or scoop to throw into latrine



Crawling baby 7 – 11 months

If your child defecates in cloths/katha/ diaper, follow the same as 0-6 month group

Begin 'potty training'

- Obtain a potty for your infant (duck, rabbit or horse shaped)
- Socialize child to potty, introduce it as 'the child's place', let child sit even when not defecating. In early months, support child to sit



Toddler/walking baby 1 – 2 years

Safe feces management

- Have under 3 child poop in potty
- Sit <3 child on the potty (even when not pooping) so they learn to defecate in a designated/ fixed place

Continue below



Young child 3 – 5 years

Socialize with latrine use

- Accompany child & hold them over latrine if needed
- Stand outside latrine, keep the door open, talk to the child while pooping
- Congratulate /reward them with words and toys
- Explain this is how 'big people' poop

Make latrine more 'child-friendly'

- Install handholds to the latrine so that the child can hold and feel stable and secure
- Make a child-sized chair that can be placed over the pan hole
- Arrange doorway or superstructure so there is light
- Keep pathway to latrine clear of obstacles

For both age groups

- Encourage child to defecate into the potty. Even if they start defecating in the courtyard ground put your baby in the potty
- Don't scold for courtyard pooping rather congratulate
- and reward for pooping in a potty
- Put some water, ash, sand and dirt in bottom of potty to keep feces from sticking
- Empty potty feces into the latrine
- 'Fling' water away from water source if rinsing potty near the source
- If child poos into courtyard or ground, use hoe or scoop to put into latrine
- Wash potty after each use

Small Doable Actions For Disposal of Faeces: How to Make a Latrine Child-Friendly

#3



Make latrine more 'child-friendly'

- Install handrails to the latrine so that children can hold and feel stable and secure
- Make a seat that can be placed over the pan hole to facilitate sitting in the latrine
- When buying or installing a new latrine, ensure a child friendly footrest in the slab more suitable for child to squat
- Alternatively, build a separate 'kid's latrine' with shallow pit and some kind of covering
- Pour sufficient water to flush feces, explain and teach them why and how
- Clean latrine slab at least once a week, or whenever slippery or with visible feces
- Arrange doorway or superstructure so there is light
- Keep the latrine path clean



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How to Wash Your Hands

- 1 Wet your hands and lather them with soap (or ash).



- 2 Rub your hands together and clean under your nails.



- 3 Rinse your hands with a stream of water.



- 4 Shake excess water off your hands and air dry them.



Critical Times for Hand Washing

WASH HANDS
BEFORE...

WASH HANDS
AFTER...

HANDWASHING



Preparing food

Cleaning child's bottom

Feeding baby or breastfeeding

Visiting latrine

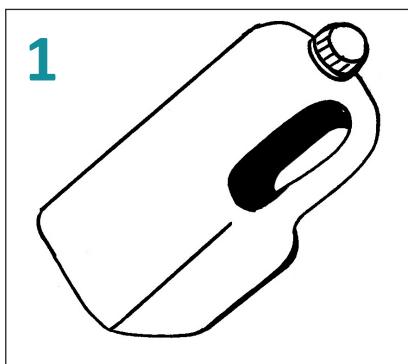
Eating

Handling and disposing of children's, animals' and birds' faeces

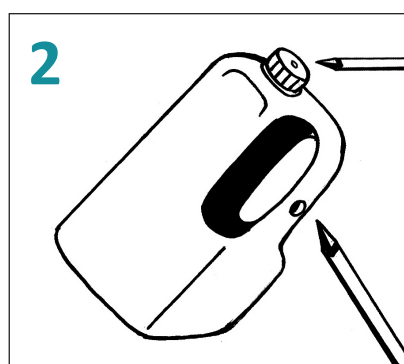
How to Make a Tippy Tap (Tilting Jerry Can)

Materials needed:

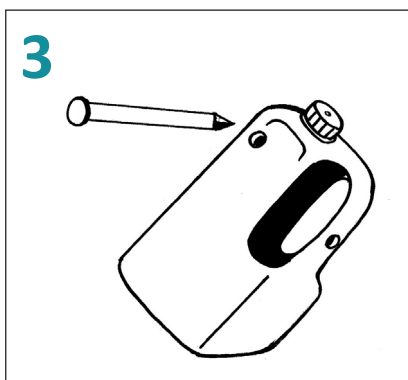
- 1 small jerry can with lid (3-5 litres).
- 2 pieces of heavy string, (60 cm) for hanging jerry can and (100 cm) for pedestal.
- A thin string (60 cm) for hanging soap.
- 3 poles, 1 suspension pole (80 cm).
- 2 standing poles preferably "Y" (150 cm).
- 1 mineral water bottle for soap protection.



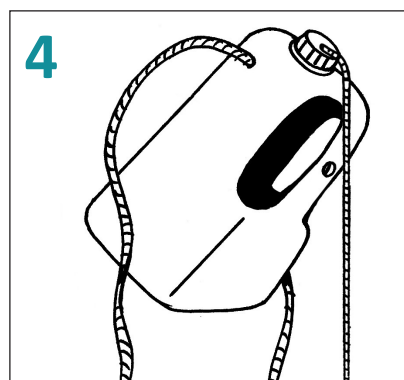
1 Get a clean empty jerry can.



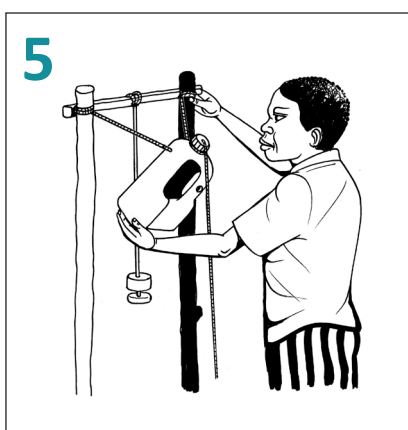
2 Using a nail, punch a hole on the lid for the pedestal string and at the jerry can handle for the dripping water.



3 Punch a hole for hanging string through the other side of the jerry can.



4 Place the hanging string through the nail holes and another string around the lid to attach to the pedestal.



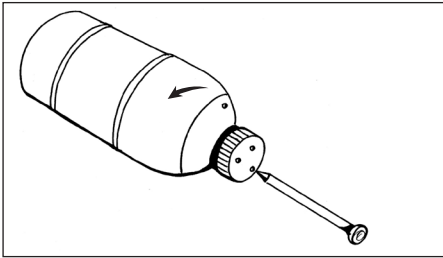
5 Hang the jerry can on two fixed poles. Make hole in soap and cut the bottom off a mineral water bottle to use as a soap protector. Fix a string through them and hang on pole.



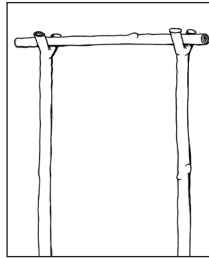
6 Tie solid stick to string attached to lid, long enough to reach about 10-13 cm from the ground. Step on the pedestal to tip water. Put in place a soak pit by digging a shallow hole (60 cm wide and 30 cm deep).

How to Make Other Types of Tippy Taps

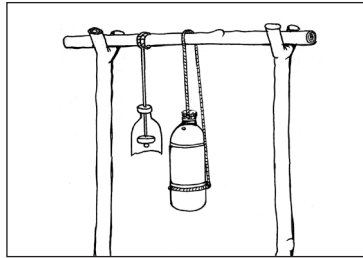
1. Mineral water bottle #1



Punch a few holes on the mineral water bottle lid and one on the bottle to allow in air.



Fix poles.

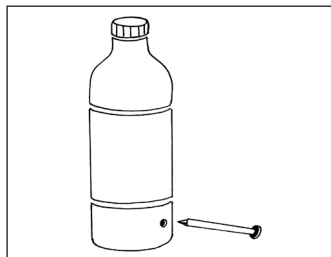


Hang bottle and washing soap on the fixed poles. Pour water in the bottle.

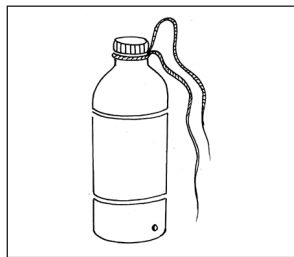


Use your elbow to tip the bottle facing down to allow water to flow.

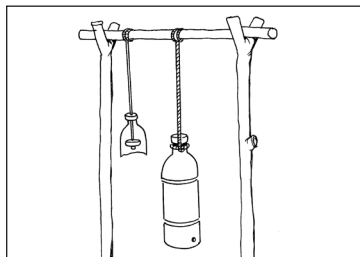
2. Mineral water bottle #2



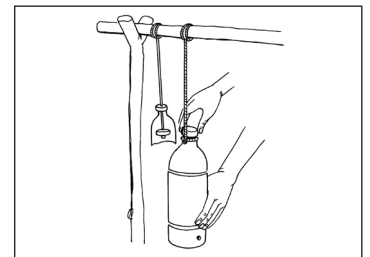
Make a hole at bottom of the mineral water bottle.



Fix string for hanging at the neck of the bottle.

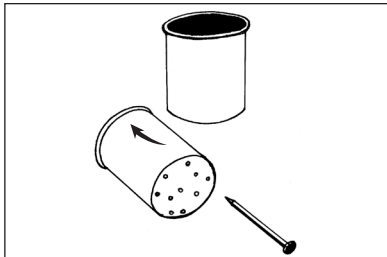


Hang bottle and washing soap on the fixed poles. Pour water in the bottle.

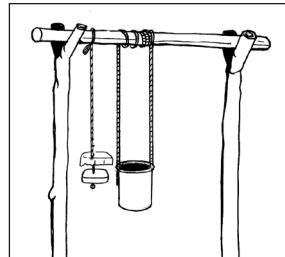


Loosen lid to allow water flow and tighten lid to stop water flow.

3. Tin can or leaky tin



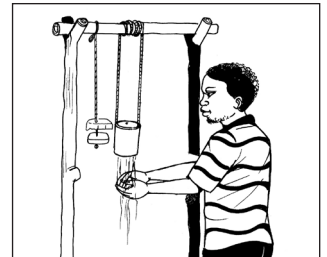
Take an empty tin, turn it over and make around 10 holes.



Hang soap and the tin on the wooden poles.

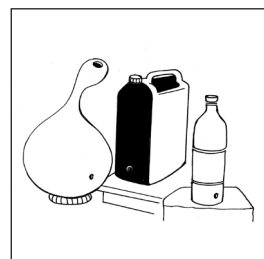


Pour a cup of water in the tin.

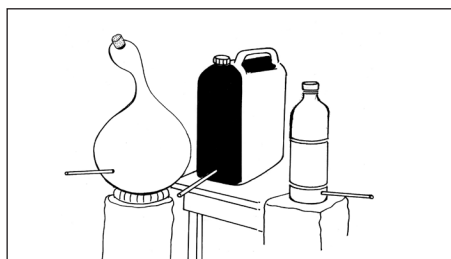


Wash hands with flowing water from the tin.

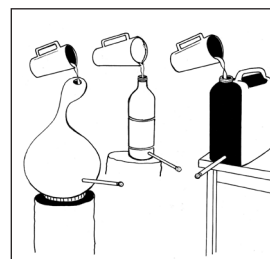
4. Hollow tube (on gourd, jerry can, or mineral water bottle)



Make a hole toward the bottom of the container.



Insert hollow tube (pen, straw, casing, pawpaw step) in the hole. A rubber band can be used as a gasket between straw and receptacle.

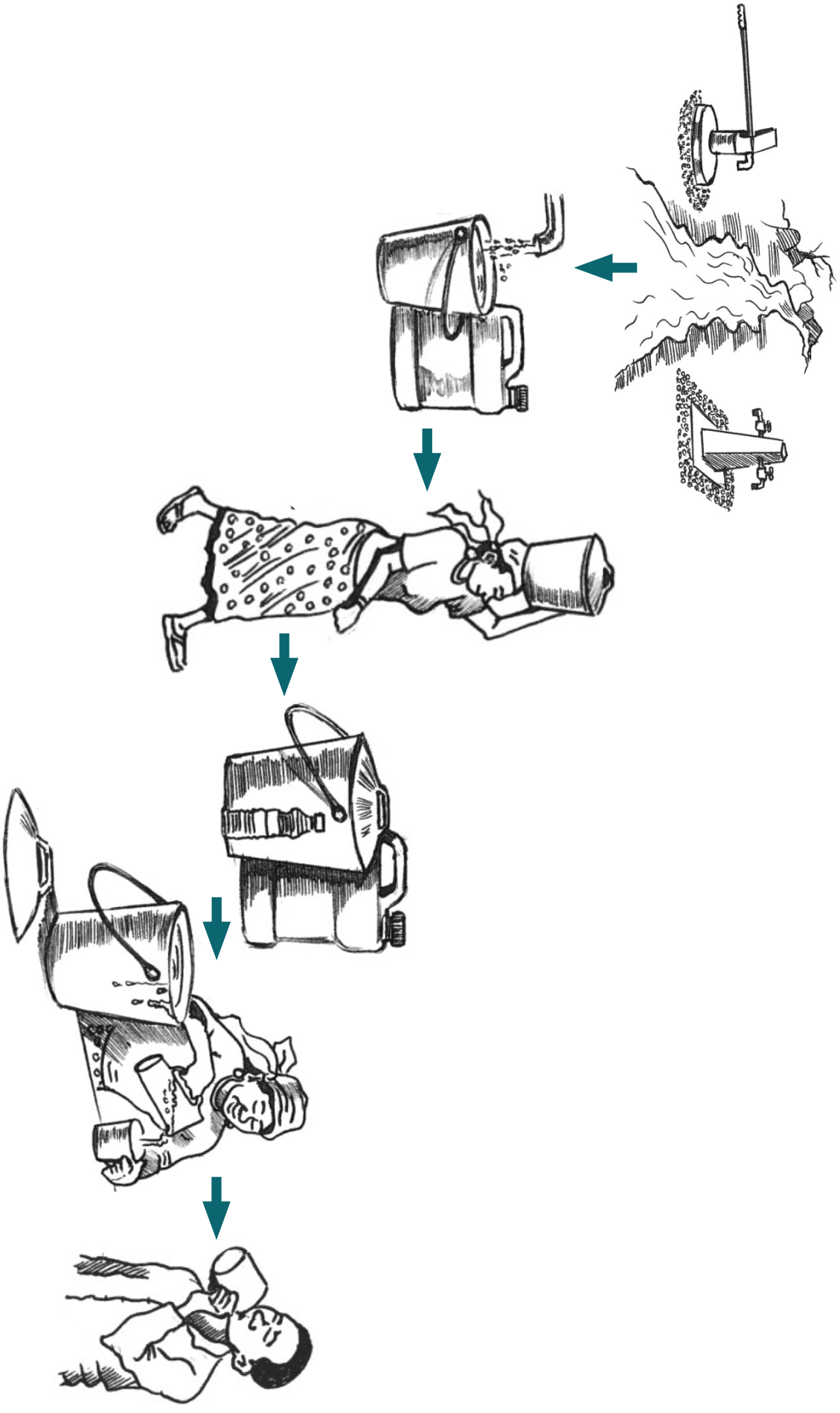


Fix plug in cover for the tube To start water flow, remove container before you pour water in the lid or plug. To stop water flow, put tight the container lid.



To start water flow, remove container before you pour water in the lid or plug. To stop water flow, put tight the container lid.

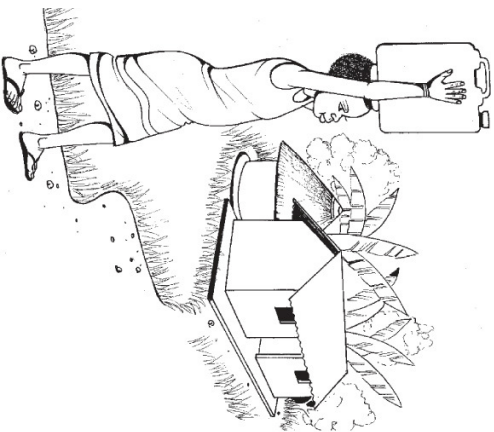
Note: The tippy tap can hang from or be tied to a tree, pole or shelf. Ensure that a soak pit is put in place for the different hand washing facilities.



Taking Care of Drinking and Cooking Water

1 Transport

Carry your water home in a container with a lid

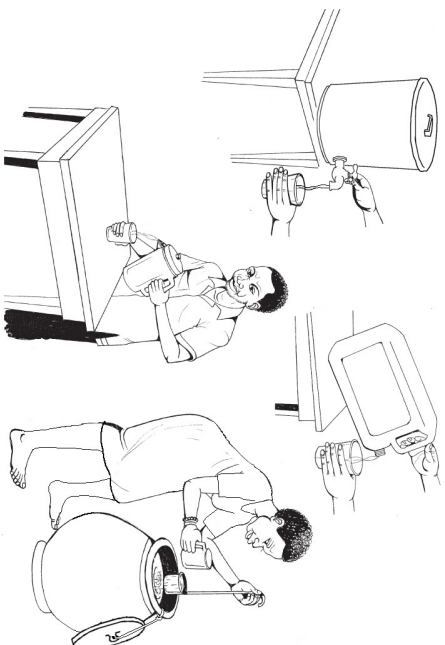


Small Doable Actions:

- Wash hands at source to avoid polluting new water
- The jerry can lid to container to avoid losing it
- Create a makeshift top with a clean potato washed each time at the source

2 Serving

Serve the water without letting anything that may be dirty touch it (such as your hands or a cup)

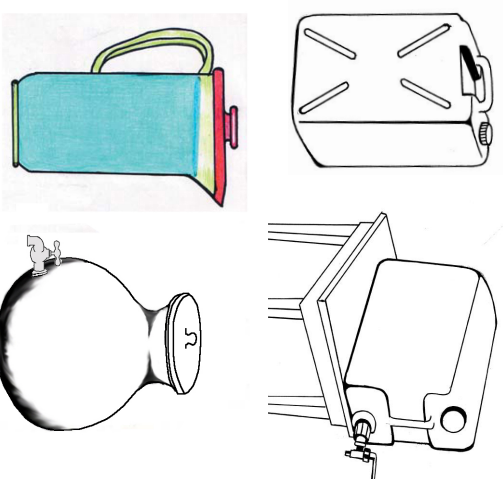


Small Doable Actions:

- Buy or make a ladle for serving and hang ladle on a wall
- Have separate cups for serving and drinking

3 Storage

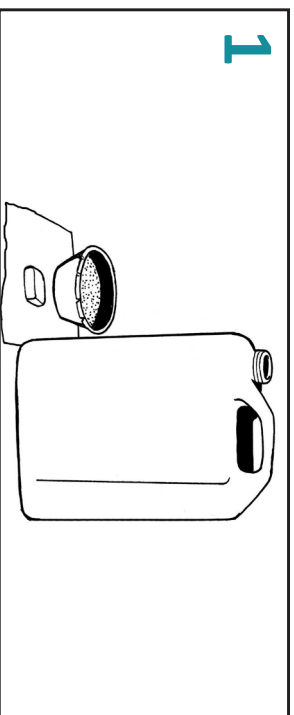
Store water in a container with a tight-fitting lid



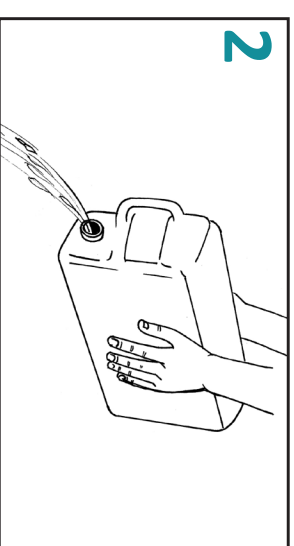
Small Doable Actions:

- Store container off the floor, ideally waist height for easy serving, to prevent contact with children and animals
- Select a container with a small neck or find a makeshift cover

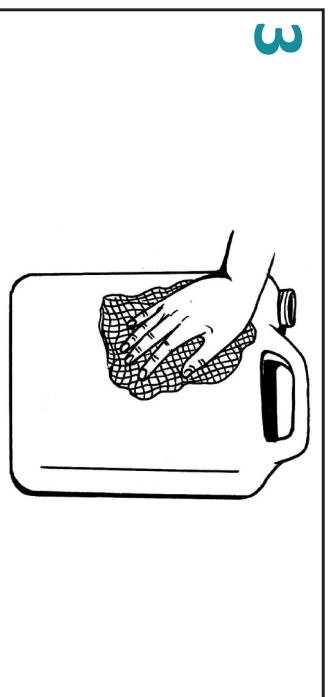
Washing water containers



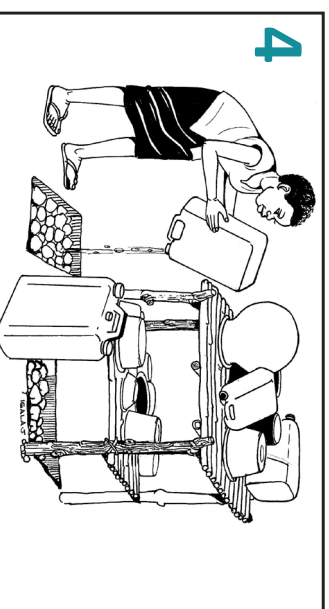
Put small amount of soapy water, or bleach ash in the container. Shake the container and pour out the water. Small stones, or steel wire must not be used because they scratch the container leaving breeding places for germs. NEVER use a rag inside and NEVER insert your hand to clean.



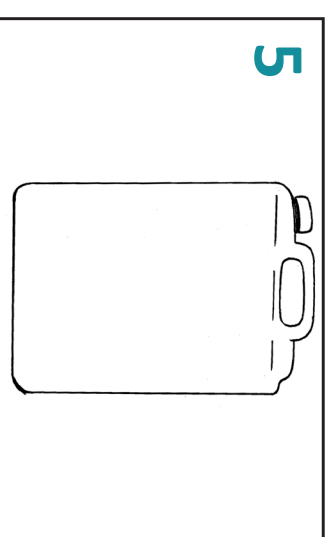
Rinse the containers with water until there is no dirt, soapy water or ash.



Use a rag to scrub the outside of the containers with soap and water. Thereafter rinse them again with clean water.

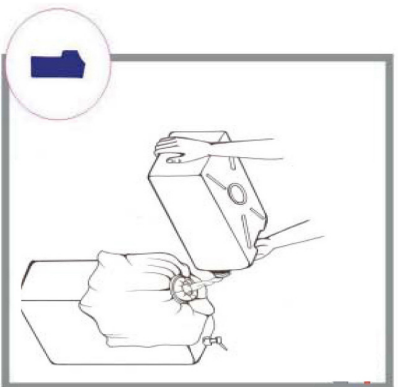


Finally hang the containers, preferably on a rack, to allow them to dry.



Cover the containers tightly and keep them away from dirt.

Chlorination (liquid)



1 Fill a clean 20 litre jerrycan with water filtered through a clean cloth.



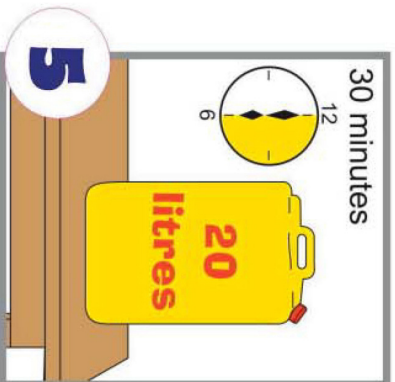
2 Fill the bottle cap with WaterGuard.



3 Pour the capful into the 20 litres of water.



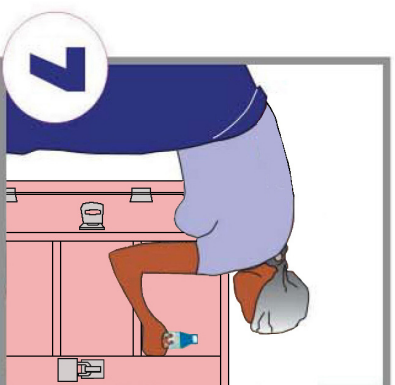
4 Close the jerrycan and shake.



5 Wait 30 minutes before using.



6 The water is now ready to drink.



7 Store it away from children and sunlight.

Remember: Do not swallow tablets and store them away from children and sunlight. Water treated with WaterGuard that is stored in a narrow neck container with a tight fitting lid can be drunk for up to seven days. Treated water in a wide mouth container or without a tight fitting lid can be drunk for only 24 hours.

(Adapted from PSI Guinea)

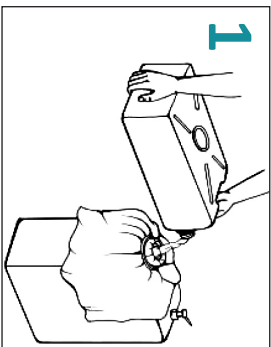
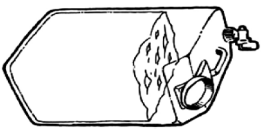


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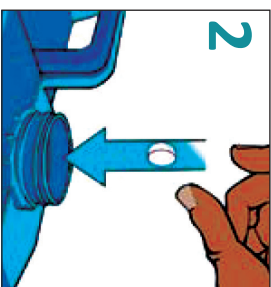


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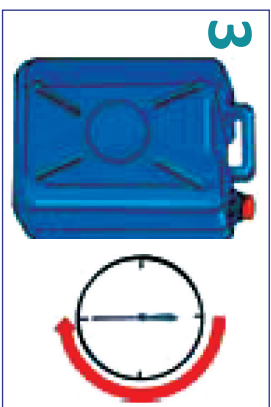
Does your water look clear?



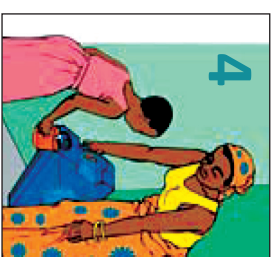
1 Filter the water through a clean cotton cloth.



2 Add 1 tablet to 20 litres of filtered water.

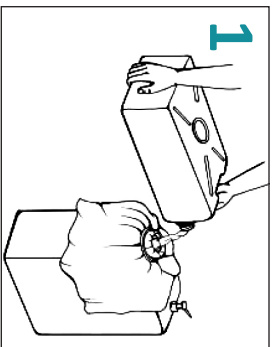


3 Wait 30 minutes.

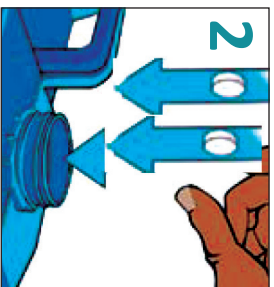


4 Water is now ready to drink.

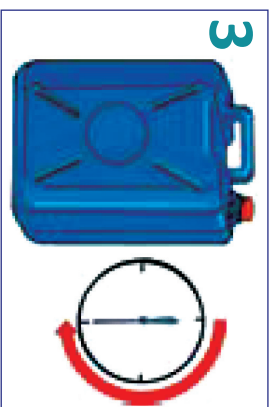
Does your water look Dirty?



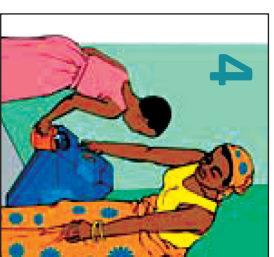
1 Filter the water through a clean cotton cloth.



2 Add 2 tablets to 20 litres of filtered water.



3 Wait 30 minutes.



4 Water is now ready to drink.

Remember: Do not swallow tablets and store them away from children and sunlight. Water treated with WaterGuard that is stored in a narrow neck container with a tight fitting lid can be drunk for up to seven days. Treated water in a wide mouth container or without a tight fitting lid can be drunk for only 24 hours.



Adapted from WaterGuard Tab and Aquatabs instructions originally compiled with thanks to PSI (Population Services International), CDC (Centers for Disease Control and Prevention), and Mediatech Ltd., Co. Wexford, Ireland.



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The only materials needed for SODIS are **clean transparent plastic or glass bottles with their lids and clear water.**

- Use only transparent plastic mineral water or soda bottles. You should not use green, brown, blue, or other colored bottles or glass bottles (because the color and glass do not allow the sun's rays to disinfect the water).
- Remove the labels on the bottles because the labels block the sun's rays from disinfecting the water.
- Fill the bottle all but a few inches with water.
- Shake for about one minute (to put more oxygen in the water).
- Fill the bottle to the top.
- Lay bottles of water down on their sides (not standing).
- To drink the water, pour some in a clean glass or cup. Do not drink SODIS water directly from the bottle, putting your mouth on the bottle.

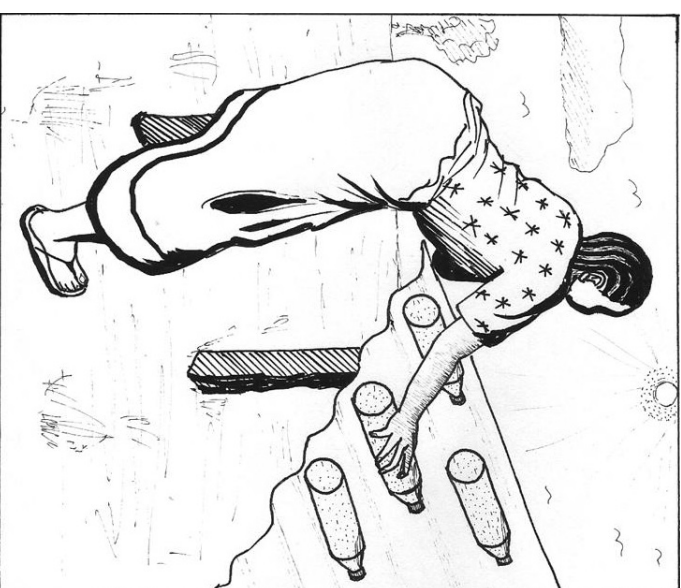
Use Clear Water ONLY!

- You cannot treat turbid (murky, chocolatey or dirty) water with the SODIS method.
- If the water is turbid, the chlorination method or the boiling method should be used.

After 6 hours in the sun, the water is safe to drink.

After 2 days in cloudy conditions, the water is also safe for drinking!

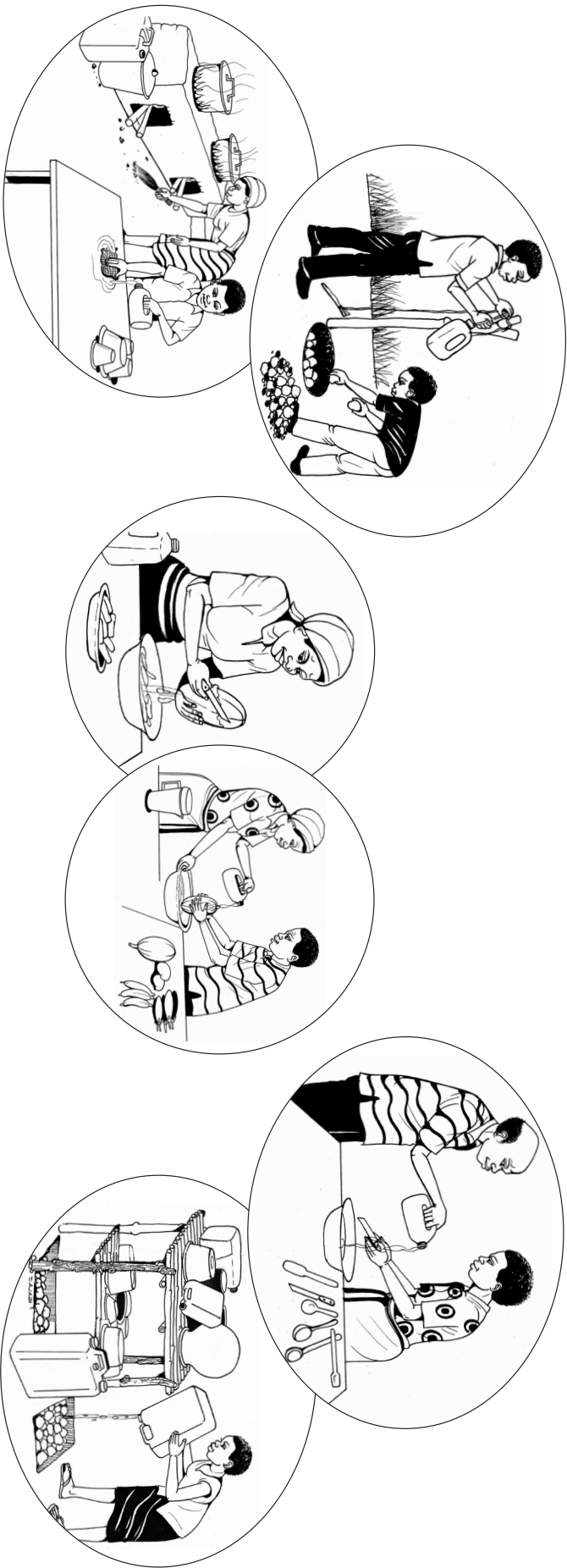
You cannot use SODIS when it is raining, because there is not enough sunlight to reach and 'clean' the water.



Pictured is a solar disinfection (SODIS) stand with plastic PET bottles placed in the sun to make drinking water safe.

You can also use a stable roof, ledge, or anyplace the bottles won't roll and fall, but bottles **MUST** be on their side so the sun can 'treat' it.

Note: 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.
- 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 bleach, if available, otherwise water and soap.
- Wash vegetables and fruits to be eaten raw under running water to remove germs, insects, and chemicals. Use treated water if possible.
- 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.



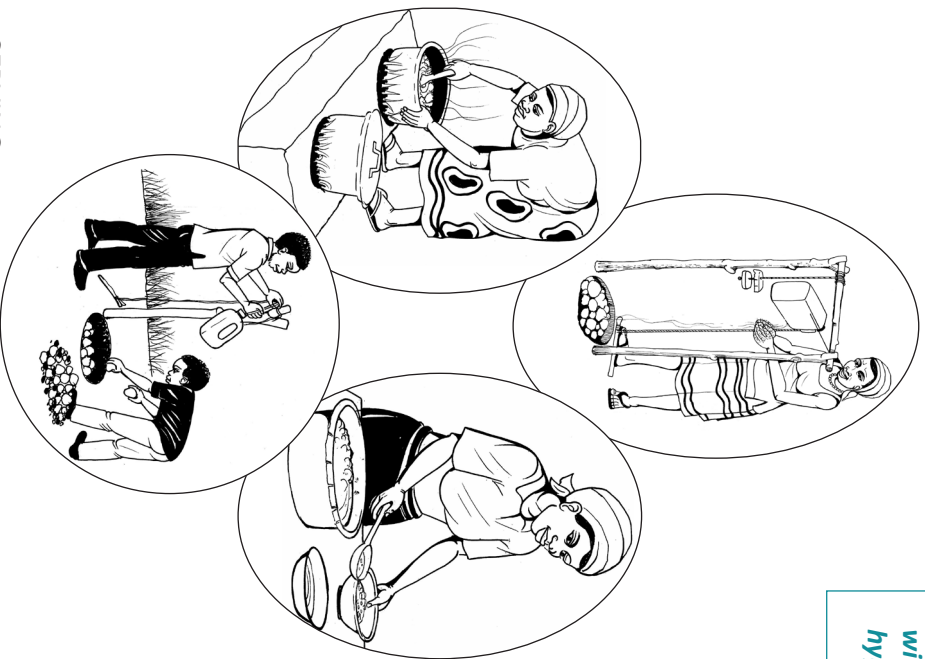
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Small Doable Actions For Keeping Food Safe: Food Handling and Preparation

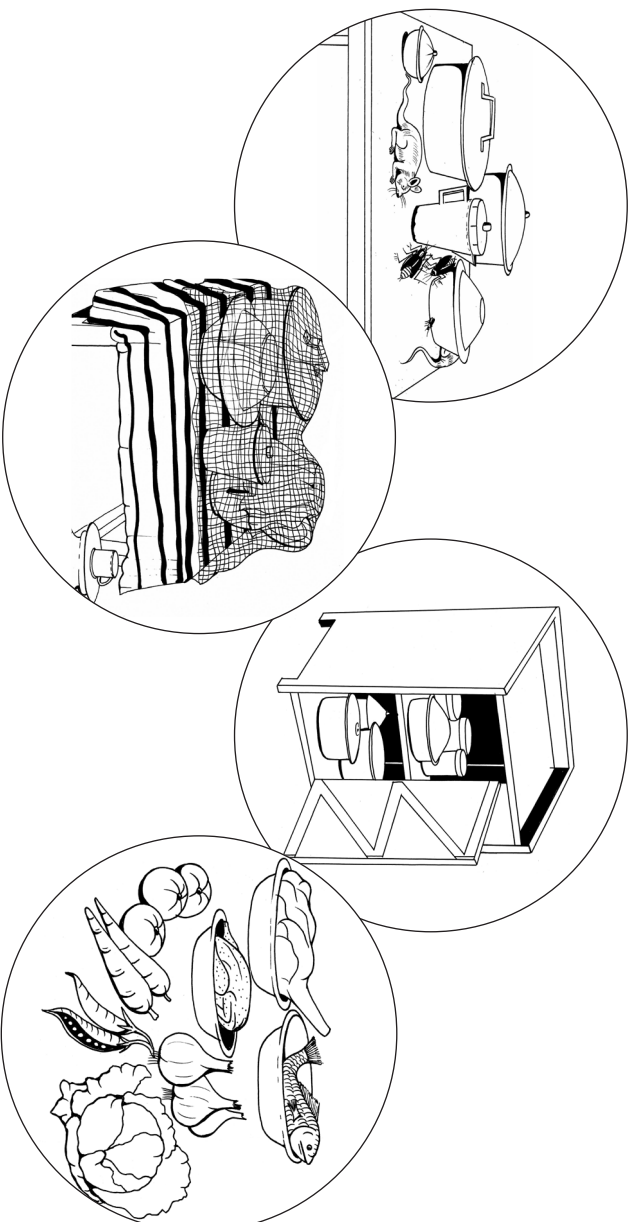
#15

It is especially important to wash hand, food containers and utensils with soap and flowing water before handling food. Adhere to personal hygiene practices like keeping fingernails short and washed.



SERVING

- Wash hands with soap before serving food.
- Heat leftovers thoroughly until you see steam or bubbles. Stir to ensure they are heated evenly.



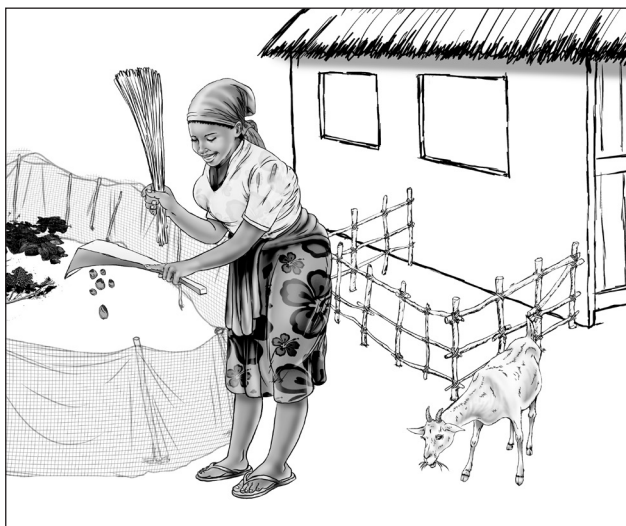
- Cover food with net, tray, or clean cloth to protect food from germs and flies.
- Construct a dish rack out of reach of children and animals near dish washing area to dry and store dishes.
- Store raw meat, poultry, fish separately from other foods in a bowl, plastic sack, or container.

Keep the compound clean of animal feces

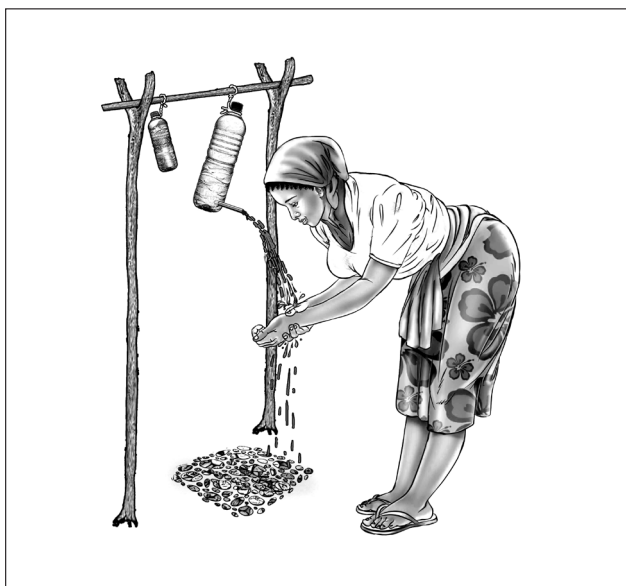


Keep children and animals separated by fencing.

Sweep the courtyard at least daily.

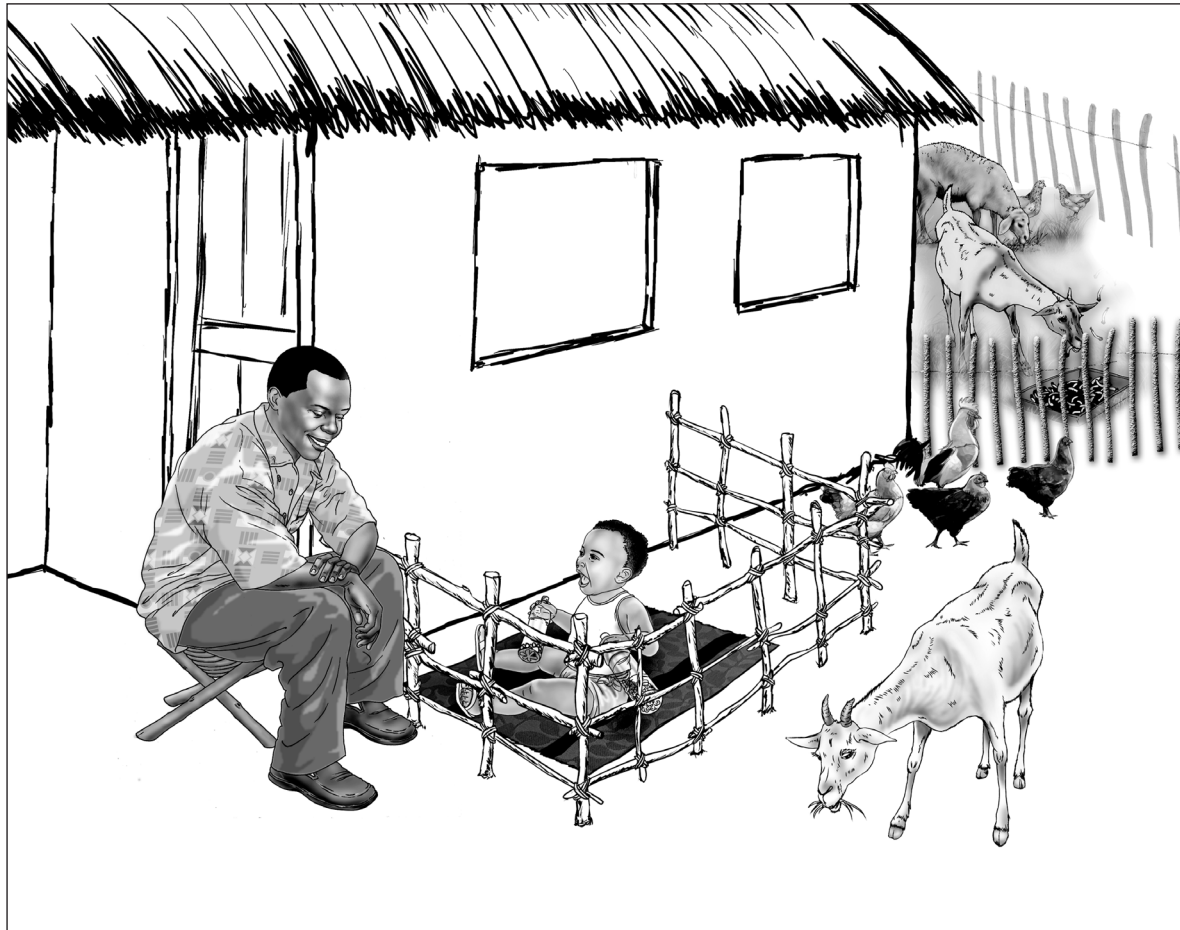


Place animal feces in a protected space, away from the child's reach.



Wash hands with flowing water and soap after handling feces.

Separating Children from Soil and Animals

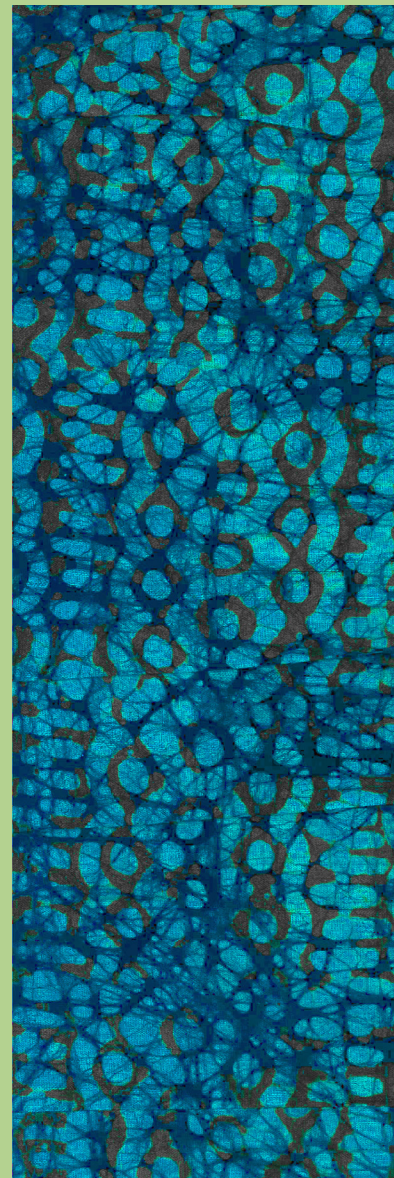


Keep infants and small children separated from animals and their feces using animal corrals and a child playpen.

ESSENTIAL WASH ACTION TRAINING SUPPLEMENT:

Nutrition Managers

Health and Community Workers



Credits for Training Materials

This work extensively draws on capacity-building materials and job aids developed over the course of the USAID/Hygiene Improvement Project and the USAID/WASHplus Project. In particular, these EWA materials feature job aids from the USAID/HIP and WASHplus Projects/ Uganda, produced with the GoU/Ministry of Health and Plan International; WASHplus /Kenya produced with the GoK/Ministry of Public Health & Sanitation and the USAID/C-CHANGE Project (FHI360). Supplementary jobs aids and drawings were graciously shared by the USAID/SPRING Project.

Capacity-building materials have evolved from the USAID/Hygiene Improvement Project and the USAID/WASHplus Project, particularly Uganda, Bangladesh, and Kenya activities. Phoebe Kasanga, Juliet Nandawula, Justin Igala and Paul Kasobya (Uganda), Evelyn Makena (Kenya) and M. Faruque Hussain (Bangladesh) merit acknowledgement for these efforts, in addition to a score of others.

Full credit to the SHINE Study WASH Interactive Tools (2014) for many of the ideas in Session 6 on Separating Infants and Young Children from Animal Feces and Soil, developed by Zvitambo Institute for Maternal and Child Health Research, Harare, Zimbabwe

Mbuya, M. N. N., Tavengwa, N. V., Stoltzfus, R. J., Curtis, V., Pelto, G. H., Ntozini, R., ... Humphrey, J. H. (2015). Design of an intervention to minimize ingestion of fecal microbes by young children in Rural Zimbabwe. *Clinical Infectious Diseases*, 61(Supplement 7), S703–S709. <https://doi.org/10.1093/cid/civ845>

Full credit for the job aids on Separating Infants and Young Children from Animal Feces and Soil goes to the USAID/SPRING Project.

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General Materials List

1. Flipchart paper (a lot!, 2 pads), markers, and tape
2. Pictures to complete the contamination cycle:
3. Five copies each of Contamination Cycle/ F Route pictures:
 - Child openly defecating, fingers, flies, fluids, fields/feet, food, and baby
4. Chicken and cow picture (just one copy each)
5. Turmeric powder, glitter, or chalk powder (or other powdered, colored substance that will cling to hands, clothes and surfaces; make sure it doesn't stain)
6. Basin, water in a pourable container, and typical bar of soap
7. Measuring cup
8. Small pitcher NOT to be used for hand washing
9. Materials for 4-5 groups to make a tippy tap and soap protector
 - Empty plastic 1/1.5 liter water bottles AND/OR 5-liter jerry can or cleaned oil containers
 - 5 small ½-liter water bottles for soap protectors
 - Pen casings or straws (anything that is hollow)
 - Sharp knives, nails, candles, or bores to drill holes in copy book paper (<<ideal if common for school children) (sharing of knives and tools OK)
 - Cord for hanging tippy taps and making the foot-style tippy tap
10. Handouts A-E
11. Job Aids 1-17

Session 1: Breaking the Cycle of Fecal Contamination

Session Learning Objectives

By the end of the session participants will be able to:

1. Describe why poor hygiene practices are dangerous for young children
2. Explain the routes that feces take from one person to another as a result of open defecation (contamination routes)
3. Identify the key barriers for blocking the “F” routes of fecal contamination

Materials and Preparation

Review the lesson plan to be familiar with the flow and exercises

- Handout A: Sad Tale of Amina
- Handout B: Full set of *Essential WASH Actions* (EWAs) and associated behaviors
- Pictures: Person practicing open defecation and picture of baby to post
- Five copies each of F pictures: Man openly defecating by the tracks, fingers, flies, fluids, fields/feet, food, and Baby
- Prepared flip chart: list of the EWAs (see example below, just the ACTIONS not all the behaviors)
- A4 sheets of paper, cut in half or blank cards, labeled with words SANITATION, WATER TREATMENT, HANDWASHING WITH SOAP, FOOD HYGIENE
- Flipcharts, markers and tape for 5 small groups

Time (60 minutes)

- A. The Consequences of Poor Hygiene Practices (15 Minutes)
- B. Feces Contamination Routes, and How to Block Them (25 Minutes)
- C. How to Prevent Contamination of the Surroundings (10 minutes)
- D. Introduction of the Essential WASH Actions and Wrap-Up (10 minutes)

Job Aids to Review within Session

None

EWA and behaviors to be reviewed

Overview of all EWA, but no detail. This is a background session before reviewing EWAs in detail.

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instruction
- *Printed in italics should be stated out loud.*

The complete set of **five Essential WASH-Actions** include:

SAFE DISPOSAL OF HUMAN FECES

WASH HANDS WITH SOAP

SAFE STORAGE & TREATMENT OF HOUSEHOLD DRINKING WATER

HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES

Trainer Steps

A. The Consequences of Poor Hygiene Practices (15 Minutes)

1. **EXPLAIN** that we will now look into the dangers of poor hygiene and sanitation practices, how they affect the growth of young children, and what we can do to make it better.
2. **PASS OUT** Handout A: Sad Tale of Amina.
ASK volunteers each read a paragraph of “The Sad Tale of Amina” to the group. Ask participants to listen carefully and think about whether the events that happen in the story are common, and what their own experiences have been. Let participants know that after the story, they will answer some questions.
3. **ASK PARTICIPANTS** these (or similar) questions based on the story:
 - *How do you think Amina got her illness?*
 - *Is this a common story? Ask 1-2 participants who said yes to tell their stories.*
 - *How could Amina’s illness have been prevented?*
 - *Who do you think is/are responsible to change conditions so that children like Amina will not die?*
 - *What role do you think that household members have to play in preventing illness?*

Possible answers:

- We are poor in our communities, it’s hard to keep children well fed or clean.
 - Children/infants spend many hours playing together and are in close contact—illness/germs can be spread more easily.
 - We all need to support each other to make changes.
 - The district government has a responsibility to bring clean water to the villages.
4. **ASK:** What are the consequences of this for the young children in our communities?
 5. **RE-ITERATE** answers you hear to ensure understanding:
 - Diarrhea
 - Vomiting
 - Lack of appetite/stop eating
 - Loss of weight
 - Lack of development/growth/stunting
 - Lack of energy
 - Missing school/chores
 - Other family members/children get sick too
 - Increased spending on medicines
 - More time spent going to the health center
 - Parents need to take children to services/miss work too

If needed, prompt participants for more answers: “What might happen when a child has that [symptom]?”

6. **EXPLAIN** link between feces, diarrheal illnesses, and lack of growth:

- A child with frequent diarrhea or other illnesses doesn’t grow well.
- Children with diarrhea tend to eat less.
- When sick with diarrhea and other illnesses, nutrients from food are not well absorbed. The body is not working right and can’t take in nutrients.
- Undernourished children are more susceptible to diarrhea. Being undernourished and getting sick again causes more malnourishment and a vicious cycle.
- Children don’t grow to their full potential. And growth doesn’t just mean tall or fat. Being malnourished also affects healthy brain development that helps people to solve problems, remember things, think ‘big’.
- Brain development can also affect someone’s ability to interact with other people, as a family member and member of the community.
- So it’s physical, mental and emotional growth that can be limited by frequent fecal consumption (eating poop), diarrhea and under-nutrition. Even when diarrhea isn’t present, frequent eating of contaminated food and water can have a lifelong effect.

CONCLUDE

A lot of the sickness that affects young children happens from feces left in the open, when people don’t have or don’t use latrines, when children are allowed to go anywhere, animals run around and defecate in the compound and near a water source.

This increased illness in our communities, which affects our children’s futures as far as growth healthy development, and successful learning. PLUS all of our nutrition efforts will work better if children have more appetite, are able to absorb needed nutrients, and do not lose food supplements or vitamins to vomiting or diarrhea.

Let’s explore this further!

B. Feces Contamination Routes, and How to Block Them (25 Minutes)

1. **POST** the picture of the person practicing open defecation

ASK: *What happens when someone defecates in the open?*

- *Where do the feces go?*
- *What happens when it rains?*

Trainers Note

This session can be done in small groups, or in the large group/ plenary in an interactive discussion. Breaking into small groups takes more time, but allows participants to be more involved. Doing the exercise in plenary saves time.

- *How do the feces get from this person or that spot into our mouths to make us sick?*

Possible answers:

- The rain carries feces into fields and streams and ponds. People drink contaminated water.
- People can walk through fields and track the feces into homes.
- Flies can land on the feces and then land on food.
- Hands can touch the feces and then touch others, or touch food.

TELL PARTICIPANTS that we have examined the problem of the practice of open defecation and begun to look at what the consequences are of this practice on the health and well-being of children like Amina.

2. **REMIND PARTICIPANTS** that feces left in the open means that:

**WE ARE EATING EACH OTHERS FECES!
THAT'S DISGUSTING! AND UNHEALTHY TOO!**

Of course we'd NEVER to do this intentionally, but that's what happens when people defecate in the open; when our young ones wander and defecate anywhere; when chickens, cows, and goats go freely through compounds and defecate in living areas.

Let's get into small groups to look at what happens when people defecate in the open, and how we can block this disgusting feces from getting into our food and water.

3. **POINT OUT** the picture of someone defecating in the open, and write the word FECES below. Post the BABY picture across, allowing space for other pictures to be posted during the exercise.
4. **SHOW AND NAME** the F pictures – food, fluids, fields and feet, flies, fingers,.
5. **EXPLAIN** that we are going to divide into groups, with each group using the F pictures. Your group is to discuss how the feces gets into our mouths through the route on your picture.
6. Using masking tape, **DEMONSTRATE** how to make a connection between ONE picture to show connections. Post the FOOD card and make a line using masking tape from FOOD to the BABY picture, showing that food can carry germs to the mouth. Then post the FIELDS picture, and explain that open defecation in a field can led to feces on the food grown in that field. Use masking tape to
7. **DIVIDE PARTICIPANTS** into 5 groups. Hand each group a set of F pictures, flipchart and markers, and a length of masking tape. Ask each group to use the pictures to create a PICTURE that shows all the ROUTES that feces can get to the baby.

8. They have 15 minutes for this activity. **ASK** them to be prepared to explain their work to the larger group.
9. When time is up, **ASK** each group to pick one F picture and explain the connection to the larger group.

Possible answers:

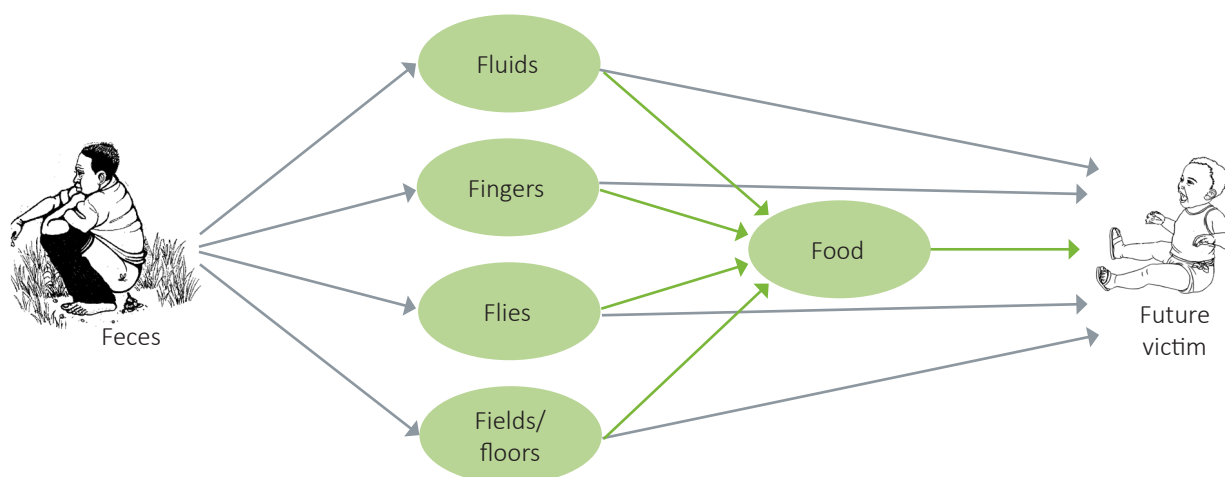
- FLIES: land on feces, then land on uncovered food
- FINGERS: touch feces after defecation, then touch food or other people
- FIELDS: people step in it or encounter it when farming
- FLUIDS: runoff from fields and open defecation spots can go into streams where people get water and it gets on your hands; drinking water is stored unsafely and gets contaminated
- FOOD: can be contaminated by unwashed hands (fingers) or by flies landing on it

CONCLUDE

We see how feces spread into the fields AND OUR FEET, carried by flies and fingers and fluids... to get into our FOOD... and eventually into the mouths of our infants and young children. We call this the F Routes diagram because in English, we can remember all the words because they all begin with the letter F.

The Fecal-Oral Contamination Routes

The Contamination Cycle (The F-Diagram shows how feces is spread)



Adapted from Wagner and Lanoix 1958

Define terminology for future reference. To **DEMONSTRATE** clearly: **DEFINE THE TERMS BY NAMING FECAL** (and point to your rear) –ORAL (point to your mouth) CONTAMINATION.

Repeat: FECAL (and point to your rear) –ORAL (point to your mouth) CONTAMINATION.

This is a serious topic, if culturally acceptable to do so, you can make it fun.... As you emphasize the FECAL... and ORAL... you can make a little dance or song to lighten up the topic about a taboo

C. How to Prevent Contamination of the Surroundings (15 minutes)

1. **RESTATE** that the F Routes diagram shows how feces are spread. And it can also help us think of ways to block these contamination routes.
2. **POINT** to F Routes diagram on the wall.
3. **SAY:** We have ways to **BLOCK FECES FROM GETTING INTO THE ENVIRONMENT, ONTO OUR HANDS, AND INTO OUR WATER AND FOOD.**

How can we block the different routes?

How about stopping open defecation and using a latrine?

TAKE the ½ sheet of paper with the word SANITATION written on it, and paste it as a barrier to feces getting to the fields, fluid, flies, flies.

3. **ASK:** *HOW ELSE can we block feces...*

How could we stop it from spreading through hands???

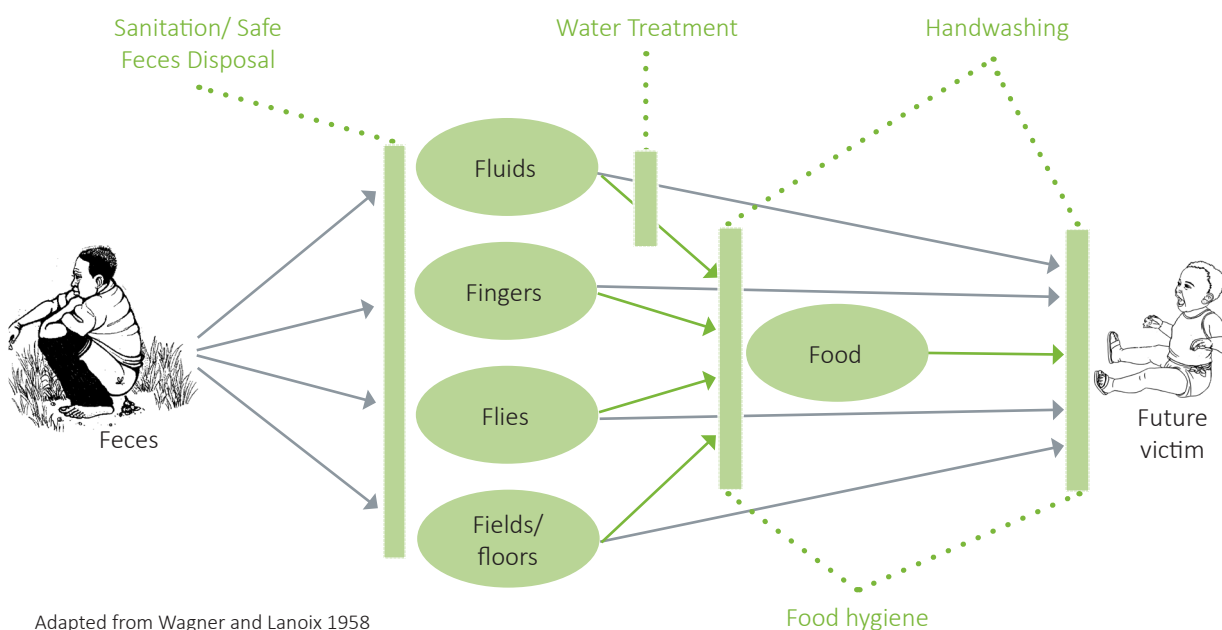
WAIT for someone to say Handwashing!

HAND THEM that piece of paper, and have them paste the barrier on the diagram.

CONTINUE until all the barriers are in place.

BLOCKING The Fecal-Oral Contamination Routes

Blocking the Contamination Cycle (Using the EWAs to Block the Cycle)



4. **REVIEW** each barrier:

- Proper latrine construction and use ... label “LATRINE”
- Proper hand washing with soap/ash after defecation Label “HAND WASHING with SOAP”
- Proper drinking transport and storage ... label “SAFE WATER”
- Making water safe to drink... “WATER TREATMENT”
- To keep feces from our food:
 - Proper washing of raw fruits and vegetables ... label “FOOD HYGIENE”
 - Proper washing and storage of food utensils ... label “FOOD HYGIENE”
 - Making food safe to eat ... “COOKING”
 - Hand washing before preparing/eating food... label “HANDWASHING WITH SOAP”

D. Introduction of the Essential WASH Actions and Wrap-Up (10 minutes)

SAY: *So together we’ve just outlined the Essential WASH Actions (and point to the flipchart with the EWAs)*

1. **TELL** the group that *we just saw how feces enters our environment and our bodies, and we examined on how to block this, how to put up a barrier so infants and adults don’t ingest feces and get sick from diarrhea; and how the barriers can reduce or eliminate diarrhea and other illness associated with ingestion of feces.*

Essential WASH-Actions



In the following sessions, we’ll review each of these key practices one by one—handwashing, safe drinking water, and safe feces disposal.

2. **WRAP UP** by emphasizing that these “barriers” are our tools or weapons for breaking the oral-fecal cycle, for blocking the routes that bring feces to our food and water.
- Handwashing with soap
 - Safe disposal of feces
 - Treatment and safe handling of household waste
 - Food hygiene
 - Separating children from soil and animal feces

These are our tools, the way to keep feces out of the environment, and out of our children's mouths, so they can grow strong and healthy. Any of these can be integrated into our work with communities and families, and make our nutrition programs more effective to help children thrive.

We'll learn more about each of these in the sessions that follow.

ASK participants to share what one or two important points or things that they learned from the session.

HANDOUT A: THE SAD TALE OF AMINA

Mr. and Mrs. Sange, simple farmers living in Falwe Village, have two daughters, five and two years old. The girls have not started school, and they spend their days playing in the fields and yards with other children in the village.

Some of their playmates have bad runny noses, some have diarrhea and pass roundworms whenever they defecate, others have skin problems scabies. All these children play together, and as happens with children, one gets sick and they pass it around, from one to the other every day. Their parents hardly notice, as this is all 'normal' in their village, and parents feel all children get diarrhea and colds, that is just part of being children.

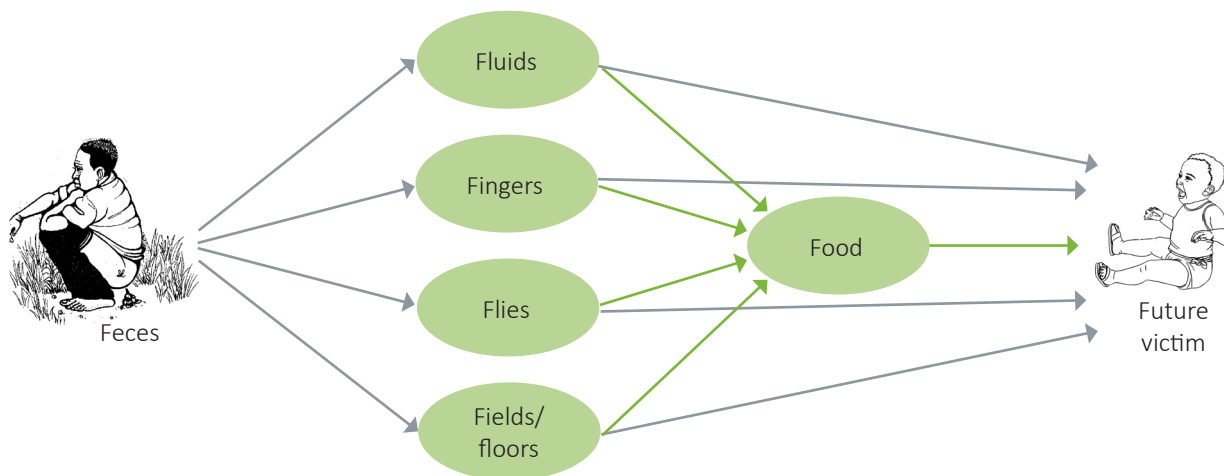
In this farm community, children are left behind while parents and other family members go to the farm every day for the whole day. The children eat leftovers—anything they can find in their own house or their friends' houses. They never wash their hands before eating, but the elders don't either. Leftovers are normally left where the small children can reach them, uncovered so flies, chickens, animals, and insects can get at the food. The water supply for this community is a pond where surface runoff is stored during the rainy season. Children sometimes go to the pond to play and drink the water.

The Sange family has a pit latrine far back from the home, but it is inconvenient to use. The older daughter finds it scary. She fears falling into the pit, and it smells terrible. So she usually waits until she's in the bush or down by the pond, where she can freely defecate in the open.

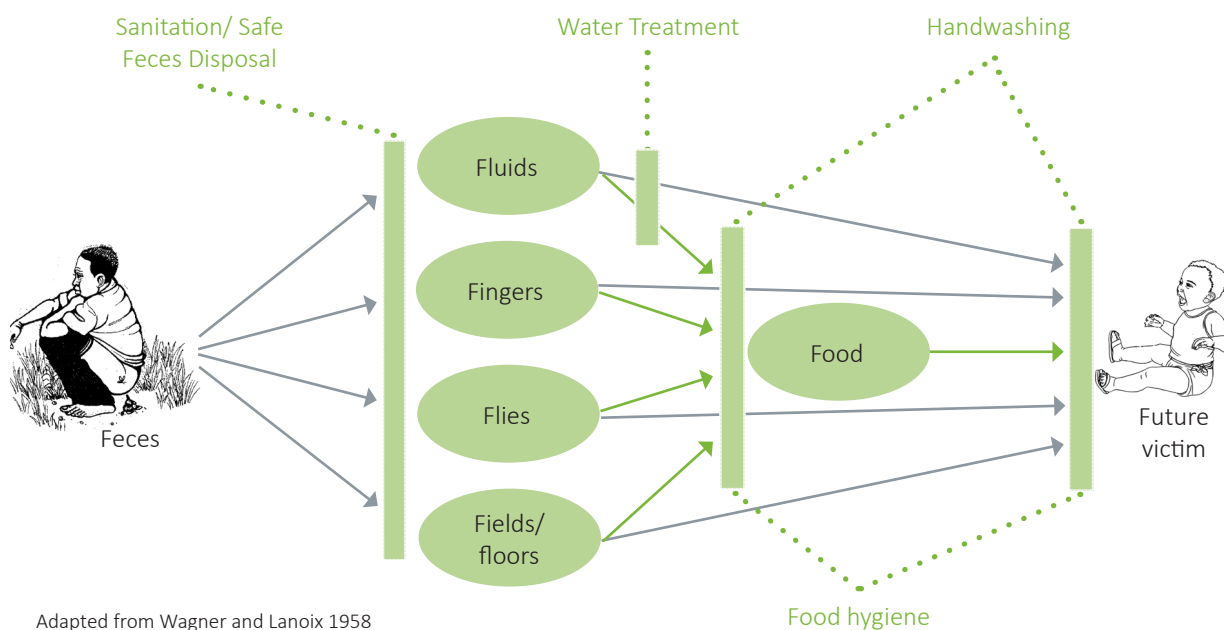
Eventually Amina, the two-year-old daughter of Mr. and Mrs. Sange, started getting sick and never got better. The mother asked her elder daughter if Amina had eaten anything at neighbors' houses. No, the elder sister said, she ate only the leftover food from our meal last night. Has she vomited or had any unusual thing?, asked the mother. Elder sister replied that she vomited only once in the afternoon, but she complained of stomach pains and had frequent diarrhea.

In the morning, Mrs. Sange saw that Amina was ill with a fever and stomach cramps. She told her husband that they had to take her to the health center. They left immediately, but by the time they reached the health center Amina was very ill. Mrs. Sange, while looking at her ill daughter, started to cry. She was scared they would lose her from this world.

Trainers Helper – The Contamination Cycle and How to Block Contamination with the EWAs



Adapted from Wagner and Lanoix 1958



Adapted from Wagner and Lanoix 1958

Session 2: Small Doable Actions to WASH Improve Practices Safe Disposal of Human Feces

Session Learning Objectives

By the end of the session participants will be able to:

1. Explain the concept of small doable actions
2. Apply the concept to the safe disposal of infant and young child feces
3. Promote safe disposal of adult and young child feces using the Essential WASH Actions

Materials

- Markers and tape for small groups
- Job Aids (see below)

Preparation

- Read Document A to be familiar with key concepts and be prepared to answer participant questions
- Review the lesson plan to be familiar with the flow and exercises
- Prepare 4 flipchart sheets with 2 columns: 1 column labeled Current Practices and 1 column labeled Small Doable Actions (for small group exercise)
- Post prepared flipchart labeled: Small Doable Actions
 - Feasible from actor's view
 - Effective

Time (60 minutes)

- A. Safe Disposal of Human Feces (10 minutes)
- B. Introducing the Concept of Small Doable Actions (10 Minutes)
- C. Small Doable Actions for Safe Disposal of Infant Feces (20 minutes)
- D. Review of Safe disposal of Human Feces EWAs and Wrap up (20 minutes)

Job Aids to Review within Session

- Job Aid 1: Safe Disposal of Feces
- Job Aid 2: What to Do with Infant Poo?? (Safe Disposal of Infant Feces)
- Job Aid 3: How to Make a Latrine Child-Friendly

EWA and behaviors to be reviewed**ESSENTIAL WASH ACTION/SAFE DISPOSAL OF HUMAN FECES**
(with associated behaviors)

- Consistently use improved latrines, including child-friendly latrines and accessible latrines, to encourage all household members to use them. Place all human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child (IYC) feces, with intermediary steps like diapers or potties, so all feces end up in latrines.
- Fling any wash water used for cleaning children’s bottoms, diaper material, and potties to disperse it, away from well sites and away from children’s play areas.
- Promote universal latrine use in the community. Participate in efforts to make the community an “open defecation-free community”.

Trainer Steps: Introducing the Small Doable Action Approach

A. Safe Disposal of Human Feces (10 minutes)

SAY: Remember our last session... using the F Routes diagram to show us what happens when feces are left in the open... and what we can do to block feces from getting into the fields, fluids and water, onto fingers and hands...

Our first Essential WASH Action addresses the SAFE DISPOSAL OF HUMAN FECES.

We're ONLY looking at this EWA in this session.

- **HAND OUT** Safe Disposal of Feces Job Aid #1.
- **REVIEW** with the group. Emphasize that ALL feces MUST to make it into the latrine... to keep feces from getting spread around by hands and feet and flies... and eventually into our food and water.

ASK: What can make it hard to get ALL feces into a latrine?

Possible answers include:

- People don't HAVE a latrine.
- Sometimes latrines smell bad or are scary, and people don't want to use them
- In our communities, menstruating ladies aren't allowed to use the family latrine
- It's all fine and good to promote latrine use.. but when we go to the fields and the market, we still don't have access to latrines.

Next we'll review some ways that will make it easier to use latrines.

B. Introducing the Concept of Small Doable Actions (10 Minutes)

1. **SAY** to the group that *we've all wanted to make changes, but have felt overwhelmed with "where to start"*.

Forgetting about WASH for a minute... let's put aside Water, Sanitation and Hygiene...

Let's say we want to change a work habit or learn a new skill or start exercising regularly. Where do we start?

2. **TELL** the group that the "small doable action" approach is a best practice for behavior change.

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instruction
- *Printed in italics should be stated out loud.*

Definition of a SMALL DOABLE ACTION

A small doable action is a behavior that, when practiced consistently and correctly, will lead to personal and public health improvement. It is considered feasible or "do-able" by the householder, from HIS/HER point of view, considering their current practice, the available resources, and the particular social context.

Although the behavior may not be an "ideal practice," more households likely will adopt it because it is considered feasible within the local context.

The small doable action approach says: don't start with the ideal behavior. Rather, identify one or a few feasible behaviors, that is, actions that seem possible from the POINT OF VIEW of the person who will be making the change. The doable action is a small move toward the ideal behavior.

Remember, we're not talking about WASH behaviors now... Let's take the example of increased physical exercise.

If the ideal behavior is to exercise vigorously at least 4 times a week to get the full health benefits of exercise, we don't start with running a marathon--or even with going to the gym every day for an hour.

Examples of small doable actions could be to walk our child to the playfield/futbol/soccer yard, and then walk home vigorously... do some household chores with more emphasis... take the stairs not the lift.

ASK: *What are some ideas you have if you wanted to take a small step toward getting some more exercise in your life.*

The small doable actions still have a positive impact, even though they are not the ideal. It's hard to go from current behaviors (often inadequate) to an ideal behavior. This is true for all behaviors, including WASH behaviors.

3. **EXPLAIN HOW TO APPLY** the small doable action approach in our WASH work:

- *Identify feasible incremental steps that move people from a current WASH behavior toward the ideal behavior*
- *Identify existing hygiene and sanitation good behaviors to be reinforced or modified*
- *Identify behaviors to be improved and negotiated with family member(s)*

A small doable action needs to seem possible to the household or community member, and it also needs to have a direct link to improved health. For example, buying a cute workout outfit or signing up for the gym are NOT small doable actions. You can sit in your living room wearing your cute workout outfit, eating a box of cookies, but that won't get you closer to the behavior of vigorous exercise 4 times a week.

Now we'll turn our attention back to WASH, and apply this small doable action approach to the first Essential WASH Action, specifically the safe disposal of infant feces.

C. Small Doable Actions for Safe Disposal of INFANT FECES (20 minutes)

Remember the story of Amina and her little sister... where did they go poo??

EXPLAIN that so much focus goes to effect of open defecation ON the health of children under five, but far less attention is paid to what happens to the feces OF infants and children under 5. What happens to infant and young child poo??? Where does it go?

Throughout much of the world, infant and child feces are not disposed of safely. In many countries, only about 1 in 5 households safely disposes of child feces. That leaves a lot of feces in the environment to get into the water and food we consume—and into what other children eat.

Even in households with improved sanitation like toilets and latrines, often half of the feces of infants and children ends up in the open because infants and children are encouraged to ‘just go’ wherever they are. The feces of the youngest infants and children is most likely to be left in the open. And the feces from sick children can lead directly to illness among the whole household, and neighbors too.

Let’s see what we can DO to improve the disposal of infant and child feces! We’ll do an exercise to identify small doable actions for the safe disposal of infant and child feces.

1. **DIVIDE PARTICIPANTS INTO 4 SMALL GROUPS**, each group focusing on one age group of young children
 - 6 months and under
 - 7- 12 months
 - 13- 24 months
 - 2-5 years
2. **HAVE EACH GROUP TAKE 15 MINUTES. USING PREPARED FLIPCHART SHEETS:**
 - **LIST** current pooping and cleaning practice (on the left of the paper)
 - **BRAINSTORM** some small doable actions to improve the feces disposal practices for one of the four age groups of small children (on the right half of the paper).
3. **AFTER 15 MINUTES, BRING THE GROUPS BACK TOGETHER.**

Without reviewing all the group work, proceed to the next activity.

D. Review of EWAs for Safe Disposal of Human Feces and Wrap Up (20 minutes)

1. **PASS OUT** the job aids: #2 What to Do with Infant Poo?? (Safe Disposal of Infant Feces) and #3 How to Make a Latrine Child-Friendly.
 - **REVIEW** together as a group.
 - **HAVE EACH GROUP** that focused on a particular age group in the exercise **READ OUT LOUD** the suggested small doable actions for that age group, and then explain if they had similar and any different small doable actions. Discuss and resolve.
 - **REVIEW** the How to Make a Latrine Child Friendly job aid along with the responses from final age group (2-5 years).
 - **EMPHASIZE** that each of these behaviors for safely disposing of infant feces are **SMALL DOABLE ACTIONS**. Point out posted flipchart to ask if actions are effective and take into account the actor’s point of view.
2. **WRAP UP** the session by reviewing the Essential WASH Actions for Safe disposal of Human Feces, one by one.

SAY: *We focused on Small Doable Actions to dispose of infant and child feces... but of course, adults also need to use the latrines.*

We don't expect you to become sanitation experts in this training, and we don't have the time to discuss how to make or promote latrine use.

We encourage you to link with sanitation efforts in your districts, and to support efforts to make universal latrine use part of your community.

As we close the session, remember you have three job aids to help ensure the Safe Disposal of Human Feces.

ESSENTIAL WASH ACTIONS SAFE DISPOSAL OF HUMAN FECES

- Consistently use improved latrines, including child-friendly latrines and accessible latrines to encourage all household members to use them. Place any human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child feces, with intermediary steps like diapers or potties, so feces ends up in the latrines.
- Fling any wash water used for cleaning IYC, diaper material and potties away from the well site and where IYC commonly plays.
- Participate in efforts to make the community open defecation free.

Session 3: Handwashing

Session Learning Objectives

By the end of the session participants will be able to:

1. Explain the reasons for handwashing and the critical times to practice it
2. Demonstrate the correct way to wash hands
3. Build a tippy tap from locally available materials
4. List the advantages of using a tippy tap

Materials

1. Turmeric powder, glitter, or chalk powder (or other powdered, colored substance that will cling to hands, clothes and surfaces; make sure it doesn't stain)
2. Basin, water in a pourable container, and typical bar of soap
3. Measuring cup
4. Small pitcher NOT to be used for hand washing
5. Materials for 4-5 groups to make a tippy tap and soap protector
 - Empty plastic 1/1.5 liter water bottles AND/OR 5-liter jerry can or cleaned oil containers
 - 5 small ½-liter water bottles for soap protectors
 - Pen casings or straws (anything that is hollow)
 - Sharp knives, nails, candles, or bores to drill holes in copy book paper (<<ideal if common for school children) (sharing of knives and tools OK)
6. Cord for hanging tippy taps and making the foot-style tippy tap
7. Flipchart and markers
8. Job Aids (see below)

Preparation

- Read Document B to be familiar with key concepts and be prepared to answer participant questions
- Review the lesson plan to be familiar with the flow and exercises
- Schedule a break before this session, so that participants re-enter the room at the start of the session
- Prepare one or two styles of tippy taps as samples (see job aids #6 and #7 as guides); fill and hang one tippy tap for use during the session
- Prepare sample soap protector (see job aid #7 as guide)
- “Secretly” recruit 1-2 assistants to help with the first handshaking activity

Time (60 minutes)

- A. The Importance of Handwashing – Short exercise and mini-lecture (10 minutes)
- B. Current Handwashing Practices (10 Minutes)
- C. What Makes Handwashing Challenging, and What We Can Do to Make It Easier (30 minutes)
 - When to Wash and How Much Water Does It Take (10 minutes)
 - Making a Tippy Tap for Handwashing (20 Minutes)
- D. Review of Handwashing EWAs and Wrap Up (10 minutes)

Job Aids to Review within Session

- Job Aid 4: How to Wash Hands
- Job Aid 5: Critical Times for Hand Washing
- Job Aid 6: Tilting Jerry Can Tippy Tap
- Job Aid 7: How to Make Other Types of Tippy Taps

WASH HANDS WITH SOAP

- Install two dedicated hand washing stations with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and 10 paces from the latrine. Designate responsibility within the family to make sure they are maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children.
- Wash hands with soap and water after using the latrine/toilet and after cleaning a child's feces; after handling animals or dung or working in the field. Wash young child's hands regularly, especially when visibly dirty and before each meal.

EWA and behaviors to be reviewed
ESSENTIAL WASH ACTION/SAFE DISPOSAL OF HUMAN FECES
(with associated behaviors)

- Consistently use improved latrines, including child-friendly latrines and accessible latrines, to encourage all household members to use them. Place all human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child (IYC) feces, with intermediary steps like diapers or potties, so all feces end up in latrines.
- Fling any wash water used for cleaning children's bottoms, diaper material, and potties to disperse it, away from well sites and away from children's play areas.
- Promote universal latrine use in the community. Participate in efforts to make the community an "open defecation-free community".

*Flowing water can run or be poured from a tap, pitcher, cup or jug. The key action is to have water rinse over hands. Dipping into still water is never acceptable for washing.

Trainer Steps:**A. The Importance of Handwashing
(10 Minutes)**

START THE SESSION with an activity as participants enter the room which makes them aware of how easily and quickly hands can spread germs.

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instruction
- *Printed in italics should be stated out loud.*

Don't be obvious, try to be casual as you greet participants.

- Coat the palms of both hands with turmeric powder or glitter (or chalk powder, colored dyes).
- Shake hands with participants, touch their shoulder with the other hand, or forearm... whatever greetings are culturally appropriate.
- Reapply the turmeric or glitter as necessary, trying not to be noticed that you keep re-coating your hands.
- Ask participants to greet each other and shake hands, too.
- Touch other surfaces in the classroom, leaving a trail of turmeric, glitter, powder, or chalk powder.

Make the exercise FUN!

1. **ASK** the following questions

- *What has happened to our hands and our friends' hands as we shook them?*
- *Where else do you see the turmeric/glitter?*
- *What might happen in a school, a marketplace, or any place where there are many people close together?*

Possible answers might include:

- Person-to-person contact spreads germs or feces contamination
- Germs clinging to unclean hands can easily get on food and from food into mouths
- The number of germs on hands soars after using the toilet

2. **TELL** the group to imagine you were about to sit down and enjoy a meal. Just before you started to eat, you noticed your hands were covered with turmeric/glitter (or chalk powder, etc.). The powder represents just a fraction of the germs from feces and other dangerous things present on our hands. Imagine that we could see our hands covered with millions of germs.

Would you want to eat food or feed an infant with those hands?

Would you continue eating?

What would you do?

3. **ASK** *what might happen if you eat food without washing hands that are covered with germs? What might happen if you prepared food with germ-covered hands?*

Possible answer: You can fall ill from the germs and the feces on your hands and also make others ill!

WASHING HANDS BEFORE FOOD PREP AND EATING IS IMPORTANT!!

4. BRIEF LECTURE

Correct and frequent handwashing makes a huge difference to a family's health and well-being. Hands are often used for anal cleansing after defecation. No matter what material is used for anal cleansing, hands still get contaminated from the feces, even if the feces cannot be seen or smelled. And we are constantly touching things that may be already contaminated – household objects, cell phones, door handles, money, etc.

[In some communities...] We handle animal dung when managing livestock, using it for fuel, and sometimes housecleaning when floors and walls include dung.

Hands must be washed before handling any kind of food. Both hands should be washed with water and a cleansing agent.

Soap is the most effective hand washing agent.

When soap is too expensive or is not available, these alternatives can be effective:

- *Wood ash will also lift and rub off any dirt and smells. The slight irritation you feel when you wash your hands with ash shows the cleansing power of ash.*
- *Clean sand with water can be used for hand washing to help rub off dirt.*

It is important that everyone always washes his or her hands after defecation, before handling food, and before feeding children.

However, most people do not wash their hands often enough, or only use water. Really, most people are hand RINSERS, NOT PROPER WASHERS!

Handwashing should be made as easy as possible by keeping the handwashing water and cleansing agent beside the latrine, and if possible, also outside the kitchen or food eating area.

Handwashing with soap or ash after defecation and before handling food or feeding an infant will improve everyone's health.

5. Current Handwashing Practices

ASK *the group What are the current handwashing practices in many homes this [district]?*

Possible answers:

- Handwashing without soap when soap is not available
- Dip handwashing from communal bowl
- No systematic handwashing after cleaning a child's potty, after defecation, or after changing a nappy
- No systematic handwashing before eating/cooking

B. The Correct Way to Wash Hands (10 minutes)

In this activity, you will demonstrate the correct way to wash hands and then have the participants practice.

SAY: *We often take it for granted, but there is a right and wrong way to wash hands, and people need to learn the right way.*

DEMONSTRATE: CORRECT HANDWASHING

1. **PREPARE** a basin, a container of water that you can pour, and soap.

2. **ASK** what is the correct way to wash hands? Collect a few ideas and say *that we will watch a demonstration.*

3. **ASK** for a volunteer who can demonstrate the correct way to wash hands properly.

YOU THE TRAINER- **POUR** water over the volunteer's hand, and use as much as is reasonably possible.

ASK the volunteer to explain each step to the group.

4. **ASK** the participants whether there were any gaps in the handwashing technique? Have the participants critique.

ASK: Were all key spots on the hands washed and rinsed? How were hands dried?

5. **HAND OUT** job aid #4, How to Wash Hands Correctly and Forgotten Spots on Hands

Review the process of correct handwashing and give a chance to other participants to practice correct handwashing.

6. **EMPHASIZE** the importance of the washing process to stop spreading feces all over!

Trainer notes:

It is best to have one volunteer wash hands as a facilitator pours the water. Use as much water as you can without being too obvious. Participants will focus on the handwashing technique, not the water use. Wastewater should be caught in the basin below and saved.

You DO NOT want to try to save water in this demonstration. Pour water over the volunteer's hand, and use as much as is reasonably possible.

This contrasts later with the savings from using the tippy tap.

POUR THIS WATER FROM THE HANDWASH INTO A CONTAINER OR PITCHER FOR MEASURING LATER!

In the washing process, the soap or ash lifts the dirt and germs, breaks up seen and unseen filth on the hands, and the water then whisks it all away when hands are rinsed. The water does not have to be clean water, but it must be flowing water. Rubbing hands together is important, too, to dislodge the filth so it can be washed away.

If you think about cleaning grain, it's that same principle.... Rub and whisk away the husk ... that's what's happening with handwashing.

Rubbing and then rinsing away are two vital actions, more than any others.

VERY IMPORTANT!!

ASK the group- *We say that flowing water is key, and that you don't need treated water for clean hands. Why do we NEVER use a bowl to dip our hands and wash?*

Wait for answers, but be certain that the group understand that **DIPPING YOUR HANDS IN A BOWL IS LIKE COATING THEM WITH [glitter/ turmeric/ whatever you used in the opening exercise] ... it's like coating your hands with feces!! We'd NEVER do that on purpose, but that is the effect of dipping into a basin to clean!**

C. What Makes Handwashing Challenging, and What We Can Do to Make It Easier (30 minutes)

When to Wash Hands (10 minutes)

1. *NOW, let's review together what we call the key times for handwashing.*

ASK *what are the critical times people must wash with soap?*

WRITE answers on a flipchart

Possible answers:

- After using the toilet
- Before eating or feeding a child
- Before breastfeeding
- Before preparing food
- After cleaning a baby's bottom or nappy

2. **EMPHASIZE** this key concept:

SAY: *If you think through what this means for the typical family of 6 [or insert average family size], that's a lot of handwashing!*

Let's say it's a family of 6, a mother, father, the mother-in-law, two children, and an infant. If every person listens to our promotion, and actually washes at those critical times, all day long... that would be.... Well anywhere between 30 to 50 washes, depending on the family and how often they eat and defecate, etc.

HOLD UP THE WATER you caught from the handwashing demonstration...

ESTIMATE how much water it took for that wash (based on the size of the container) and tell the group.

WRITE that number on a flipchart

SAY: *So if one wash takes _____ liter _____ water and each family together washes 30-50 washes a day...Who has a calculator on their phone to calculate how much water it would take for a family of 6 to handwash each day!*

(Have someone multiply the amount of water for one wash by 30... **WRITE THAT DOWN.**

Then **MULTIPLY** the amount of water for one wash by 50... and **WRITE THAT DOWN.**

POINT to or hold the typical jerry can or water container

SAY: *Two to four more trips to the well!!!!*

Think about that! If families listen to us, and need to collect more water, they are probably sending their girls.

Needing 30-50 more litres a day (or whatever number you calculated)...!!!

That's enough to keep a girl or all children from making it to school!!! And we wouldn't want that!!

ASK the group: *Do you think most homes would be able to provide that amount of water just for hand washing?*

What are other reasons why it's DIFFICULT to follow the recommendation of a proper handwash with flowing water and soap at all the critical times?

Participants might give the following answers

- It's not the custom
- The mother-in-law says it's not necessary
- Fathers do what they want, and don't listen to the children or wife
- People don't know the correct way, they are hand rinsers
- People don't know all the key times
- Soap is not plentiful and there is not enough for handwashing
- We don't have clean water available to wash hands
- We don't have 'flowing' water

EXPLAIN: *We will learn how to build a hand washing device—a tippy tap— to help wash hands at the critical times even when water is scarce.*

SHOW and pass around a sample tippy tap. Quickly bring up a volunteer to wash hands with the sample tippy tap that is hanging. Measure the water for this handwash, and contrast it to the amount without tippy taps.

WRITE on a flipchart

| | |
|------------------------|----------|
| Washes | 1 |
| Typical HW = 1 litre | |
| Tippy Tap HW = ¼ litre | |

Now who was my mathematician? Tell me now how much water it will take for 30 and for 50 washes? **WRITE** that number next to the 'old' number.

Typical WASH = XX times 30 washes =

Tippy Tap WASH = YY times 30 washes =

| | | | |
|------------------------|----------|-----------|-----------|
| Washes | 1 | 30 | 50 |
| Typical HW = 1 litre | | | |
| Tippy Tap HW = ¼ litre | | | |

This is a simple technology to make handwashing easier. It uses less water and assures that water is flowing, and people don't dip their hands into a basin.

Making a Tippy Tap for Handwashing (20 Minutes)

ASK THE GROUP: *has anyone ever made or used a tippy before? How was it constructed?*

DISCUSS.

1. **PASS OUT** Job Aid #7. How to Make Other Types of Tippy Taps.

LOOK CLOSER at the examples you have, including demonstrating the soap protector.

Look at this! Another challenge to proper handwashing is having soap handy. This protects the soap from the rain, from goats and birds... and makes it last longer!!

TALK THROUGH each picture of the different types of tippy taps.

2. **DIVIDE** the participants into groups of 5-7 and have each group make a tippy tap and soap protector. Encourage groups to be innovative.

3. **PROVIDE** each group with materials to make a tippy tap.

- An empty plastic 1 or 1.5 liter water bottle, a gourd, or a five liter jerry can.
- A pen casing, a straw- anything that is hollow
- A sharp knife, a nail and candle, a bore for making school notebooks, or a screw driver to make a hole in the vessel.

4. **LET THE GROUPS REVIEW** the job aid and your samples, and experiment with making tippy taps.

5. **LET EACH GROUP MAKE A DIFFERENT TYPE OF TIPPY TAP.** The facilitator should also make one for demonstration. This will allow the participants to see for themselves the different options that can easily be made using locally available materials.

Let participants experiment and struggle without intervening. In this exercise, participants often innovate and invent new tippy tap options!

At the end of the 15 minutes, ask groups to hang their tippy taps and show off what they have made. Let the groups walk around and see each others models. Have participants take the remaining 5 minutes to examine other group's tippy taps, while highlighting any unique design features. Ask the group if they had any challenges, and how they resolved it.

F. Debrief and Wrap Up (10 minutes)

- REMINDE THE GROUP** of the advantages of tippy taps
 - Serve as a reminder to wash
 - Allow for handwashing with flowing water in the absence of running water
 - Allow for “proper wash” with much less water
 - Allow for the flow of water to be regulated, to minimize the amount of water required to wash hands thoroughly
 - Soap is on hand whenever handwashing takes place
 - A convenient and fun way to wash
- ASK** the group the following questions and write down the groups responses on the flipchart:
 - *Do you think handwashing stations could be useful at home? Why?*
 - *Where should they be located? (Near latrines, near food preparation area)*
 - *Is one enough? (Probably not —you can make 2 or more and hang them from poles or stand them on a platform)*
 - *What ideas do you have to make sure enough soap is always available?*

HAND OUT the final job aid #5 Critical Times for Handwashing.

REMINDE THEM they have 4 job aids to help people handwash:

- How to Wash Your Hands
- Critical Times for Handwashing
- How to Make a Tilting Tap (Tilting Jerry Can)
- How to Make Other Types of Tippy Taps

ESSENTIAL WASH ACTION HANDWASH WITH SOAP *(with associated behaviors)*

- Install a dedicated hand washing station with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and the toilet. Designate responsibility within the family to make sure it is maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children. This is the most important time to wash!
- Wash hands with soap and water after going to the latrine/toilet and after cleaning the child's feces; after handling animals or dung or working in the field. This is also a key time for washing.
- Wash young child's hands regularly, especially when visibly dirty and before mealtime.

CONCLUDE by reminding the group

So we see that to promote handwashing, it's not just TELLING people to do it. They need:

- *to know when to wash, and HOW to wash correctly.*
- *access to enough water, and tippy taps can help.*
- *access to soap and to think that everyone around them thinks it's really important to wash hands.*

*Flowing water can run or be poured from a tap, pitcher, cup, or jug. The key actions is to have water rinse over hands or food. Dipping into still water is never acceptable for washing.

Session 4. Keeping Drinking Water Safe from Source to Mouth

Session Learning Objectives

By the end of the session participants will be able to:

1. Identify the links in the water safety chain
2. Describe how to keep water safe at each “link” of water safety chain
3. List effective methods for making water safe for drinking
4. Describe the advantages and disadvantages of each method

Materials

- Job Aids (see below)
- Handout C: Small Doable Actions to Keep Water Safe
- Handout D: Advantages and Disadvantages of Water Treatment Methods

Preparation

- Review the lesson plan to be familiar with the flow and exercises
- Read Handout C and D to be familiar with key concepts and be prepared to answer participant questions
- Prepare and post flipchart with diagram of water safety chain (consider making ‘links’ on individual sheets and pasting them together)
- Prepare and post flipchart sheet with 2 columns labeled :Ways to Contaminate” and “Small Doable Actions”
- Prepare 3 small ½-liter bottles with safe drinking water. Add salt to ONE of the bottles, half a spoonful at a time, shaking or stirring for it to dissolve. Add about 2 spoonsful until the salt is all absorbed into the water but tastes VERY salty. Add sugar to ONE of the bottles, half a spoonful at a time, shaking or stirring for it to dissolve. Fill third bottle with drinking water only.
- Collect all the treatment supplies and familiarize yourself with the methods. Be sure to note the proper dosage for the chlorine products.

- Prepare a flipchart with these lessons, but cover it or fold in half until the end of the session.
 - Even water that is safe at the well can become contaminated
 - Clear water is not always CLEAN water
 - Water can become contaminated while carried, stored, or retrieved
 - The best way to carry water is in a covered container
 - The best way to store water is in a covered container with a spigot (tap)
 - The best way to retrieve water is to use the spigot or pour it out
 - Never dip a bowl, cup, or your hands into the container with your treated water to avoid RE-contaminating
 - Always serve water using a clean cup or ladle.
- Prepare another flip chart

| Possible ways to contaminate | SDA to keep safe |
|---|---|
| Supply <i>Animals wander & drink from pooling water</i> | <i>Build a simple fence around the well</i> |
| Transport | |
| Storage | |
| Serving | |

Time (60 minutes)

- A. The Links in the Water Safety Chain (10 minutes)
- B. Ensuring Water Remains Safe to Drink (20 minutes)
- C. But It Looks So Clean! (5 minutes)
- D. DISCUSSION and MINI-LECTURE (20 minutes)
- E. Review of Essential WASH Actions and Wrap-up (5 minutes)

Job Aids to Review within Session

- Job Aid 8: Safe Water Chain
- Job Aid 9: Taking Care of Drinking and Cooking Water
- Job Aid 10: Cleaning Drinking Water Storage Containers
- Job Aid 11: Chlorination (liquid)
- Job Aid 12: Chlorination (tablets)
- Job aid 13: How To Practice Solar Disinfection or SODIS
- Handout C: Small Doable Actions to Keep Water Safe
- Handout D: Advantages and Disadvantages of Water Treatment Methods

EWA and behaviors to be reviewed

SAFE STORAGE AND TREATMENT OF HOUSEHOLD DRINKING WATER

- Collect drinking water from the safest, protected source available.
- Treat drinking water with an effective treatment method.
- Store drinking water in a covered container and raised off the floor. If possible, use a container with a spigot or tap, a narrow opening or narrow neck to protect the water by encouraging pouring, and restricting hands from entering.
- Extract water by pouring into a cup or vessel. If no tap, use a dedicated ladle/dipper that hangs on the wall.
- Drink from a clean cup.
- If treated water is limited, prioritize giving safe water to children under 2, the elderly, pregnant and nursing mothers, and sick householders.

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instruction
- *Printed in italics should be stated out loud.*

Trainer Steps: Keeping Drinking Water Safe from Source to Mouth

A. The Links in the Water Safety Chain (10 minutes)

1. **EXPLAIN:** *We have learned about the problem of defecating in the open, how to block the various F routes, and have already looked extensively at a four of the Essential WASH practices. Now we will learn another way to block feces from entering our food and water. We will learn about keeping water safe from source to mouth—from where you collect it until you consume it-- and how we can ensure that our homes have safe drinking water for the whole household.*
2. **ASK** participants:
 - Where they get their water (what source or supply) See note below, if most participants have running water)
 - How they transport water from the source to their home
 - How they store drinking water at home
 - How they serve drinking water at home

Take a sampling of answers to introduce the range of links in the water safety chain.

3. **PASS OUT** job aid Water Safety Chain
4. **POINT OUT** posted water safety chain and explain that these are links in what we call the Water Safety Chain, and each part needs to be protected from feces contamination to make it safe. It is called the Water Safety Chain because if hygiene breaks down at any one link in the chain, the water is no longer safe for drinking later in the chain.
5. **AS A GROUP**, have each person label the key links (supply, transport, storage, serving) on their handout. Trainer should do the same on the flipchart.

Trainer notes:

If participants all have running water, ask them to also think about the communities they serve, and modify the questions to reflect this... for instance:

- Where do the villages where you work obtain their water?
- How do they transport it?
- How do they store it at home?
- How do they serve it for drinking?

B. Ensuring Water Remains Safe to Drink (20 minutes)

1. **EXPLAIN:** *We're going to do an exercise as a group to first outline some of the ways water can get contaminated at each point of the water safety chain. After we go*

through all of the ways, we'll come up with some small doable actions to keep water safer and protect it from contamination.

2. **ASK:** the group the following questions and make sure the key points from the chart on the next page are discussed.

- How can dirt and feces enter the water at the different points in the water chain and contaminate it? These are some of the factors that influence safe water behaviors.
- What can you do at each point in the water chain that will prevent feces from making the water unsafe to drink?

Definition of a SMALL DOABLE ACTION

A small doable action is a behavior that, when practiced consistently and correctly, will lead to personal and public health improvement. It is considered feasible or "do-able" by the householder, from HIS/HER point of view, considering their current practice, the available resources, and the particular social context.

Although the behavior may not be an "ideal practice," more households likely will adopt it because it is considered feasible within the local context.

REMINDE the group the definition of small doable actions.

GO THROUGH each link in the chain, one by one.

DON'T make a comprehensive list... develop with the group in plenary a few small doable actions.

Using prepared flipchart

- **ASK** participants for potential ways in each "link" that water could be contaminated. Post answers in the first column.
- **SECOND, ASK** participants to list a few small doable actions to make it less risky, in other words to better protect the water. (Refer to example to the below)



| Possible ways to contaminate | SDA to keep safe |
|--|---|
| Supply <i>Animals wander & drink from pooling water</i> | <i>Build a simple fence around the well</i> |
| Transport | |
| Storage | |
| Serving | |

DISTRIBUTE HANDOUT C. Ask participants if they missed any doable actions that they think would be important to promote in their community.

Handout C: Small Doable Actions to Keep Water Safe

| Steps in the Water Safety Chain | Small Doable Actions |
|--|---|
| <p>Supply of Water Animals wander to drink, defecate near source</p> <p>Water collectors often put unclean hands into containers when collecting</p> | <p>Protect the source: If a well or standpipe</p> <ul style="list-style-type: none"> • Build a fence so animals cannot defecate nearby • Build a raised platform and/or a soak pit • Wash hands with soap before collecting water • Do not put hand into container when collecting <p>If an open source or stream:</p> <ul style="list-style-type: none"> • Assure no animals or humans defecate upstream |
| <p>Transporting Water Hands get into the container while carrying</p> <p>Tops of jerry cans get lost</p> | <ul style="list-style-type: none"> • Use a narrow neck container • Cover container • Attach cover to jerry can with a string so it doesn't get lost/stolen. • Punch small hole in center of top. Thread with string and knot. • Tie other end of string to neck of container short enough so top doesn't touch the ground • Make a top with a clean potato or other object that can be washed |
| <p>Storing Water Water sits on floor, flies, animals children stick hands inside</p> | <ul style="list-style-type: none"> • Maintain water in covered container • Raise container off floor |
| <p>Serving Water People dip a dirty cup to extract water</p> <p>Unwashed hands touch water</p> | <p>If no spigot on container:</p> <ul style="list-style-type: none"> • Pour water into serving jug or directly into cup for drinking • Make a simple dipper/ladle for serving from calabash or can and stick. Hang on wall. |

DISTRIBUTE two job aids:

- #9 Taking Care of Drinking and Cooking Water
- #10 Cleaning Water Storage Containers

REVIEW contents, emphasizing that these steps help assure that water for drinking and cooking are the safest possible for our children and families.

Key Points for Discussion

1. **Water Sources:** Some water sources such as rivers, unprotected springs, or wells are already contaminated or have the potential to be contaminated. If a river is the only source, water should be collected upstream from any washing or bathing of people or animals. A well or spring should be fenced to keep animals away. The collection bucket and rope should be kept off the ground.
2. **Water fetching containers:** Water can also be contaminated if water containers such as clay jars, jerry cans, etc. are not cleaned or maintained properly. Ask how often and what methods people use to clean their containers. Explain that proper washing includes filling the container about 1/4 full with water and little soap or a little bleach, swishing it around the container, letting it sit for at least 20 minutes, rinsing until no soap or bleach is left, and finally drying the container in the sun. Another good alternative is to insert some sand and/or small stones with water and shake them vigorously. Then rinse and use.

No cloth, rag, or hand should ever enter inside the jerry can.

3. **Transporting water:** Even if it is fetched from a safe and protected source, water can also be contaminated during transport. Putting the water into an already contaminated container is common. So is slipping dirty fingers into an open container when carrying on the head or hip.
All containers should be covered properly using clean covers or screw caps. A covered jerry can is the best. Open buckets are easy to contaminate and should be replaced by covered containers. Caps can be secured to the jerry can by using a 35 cm or so string. Tie one end around the jerry can neck and secure the other end to the lid by punching a hole through the inside of the lid, threading the string through the hole and tying it off with a knot.
4. **Storing water:** Water can be contaminated at home when it is left open where animals can drink it or children can dip their hands in it. The safe way is to store it in a container that can be covered with a screw cap or a hard cover. A clean jerry can is also a safe storage container.

Always keep the container off the floor.

5. **Serving water at home:** Dispensing from a tap in the container is best, but not always an option. Pour water directly from the container into the drinking cup. Or pour water into a serving jug that can be used to pour water into the cup. Or use a clean dipper or ladle that is hung on a nail when not in use.
6. **Cleaning serving utensils:** Wash all items used to serve water with soap and water and dry on a drying rack. Never place utensils on the floor.

Trainer Steps: Water Treatment Methods

C. But It Looks So Clean! (5 minutes)

DEMONSTRATION: SWEET/SALTY WATER

1. Show the participants three prepared bottles of water. Ask them to look at them closely. Ask them if they see any difference in the water in the bottles. Do they look safe to drink?
2. Ask volunteers to come up and select a bottle to taste. Assure participants that you won't do anything unsafe or that will make them sick, hurt nor embarrassed. They should both drink the water at the same time and be standing so that the other participants can see their faces when they taste the water. Repeat this process with the same volunteers using the water WITH salt.
3. Give the volunteers the opportunity to explain the difference between the two bottles of water.
4. Ask the observers what they learned from the volunteers' experience drinking the water. Reinforce the idea that although water appears clear and clean, it may have germs that can make a person ill.
5. Tell participants that we have just seen that it is possible for water to look perfectly clear and good to drink when it can actually have something in it that is very bad for you. This example just used table salt. But there are other invisible things that can make one very sick. It is therefore important to know what to do to "kill the germs" in water so that it is safe to drink, which is called "treating" your water.

D. DISCUSSION and MINI-LECTURE (20 minutes)

ASK participants: *What do people do to make the water safer for drinking? Do most of the communities you serve have concerns about the quality of their drinking and cooking water?*

Treatment Options

Ask Participants: What methods to people in your community use to treat drinking water?

SAY: *We don't have time to practice all the possible methods in this training. We will review the 4 most common methods.*

Four types of water treatment are effective at cleaning the water for drinking:

- *Boiling*
- *Chlorination, best known by the products AquaTabs or WaterGuard [substitute in any local brands]*
- *Solar disinfection*
- *Filters*

When using quality products (not expired, and filters that work) and treating the water consistently and correctly, these methods make the water safe for drinking and cooking. There are pros and cons of each, that we'll review.

We'll have a mini-lecture here to review the methods.

PASS OUT HANDOUT D and the 4 job aids on Solar Disinfection, Using AquaTabs and WaterGuard

REFER participants to Handout D with advantages and disadvantages of each method.

TELL them they might want to use this while you talk through the methods.

PULL in participant experience, but be mindful that this session involves a lot of material and little extra time.

Handout D: Advantages and Disadvantages of Water Treatment Methods

| Treatment Method | Advantages | Disadvantages |
|---|--|--|
| Boiling | <ul style="list-style-type: none"> • Every home has a place to boil water • Cheap (if fuel is cheap) • Effective—boiling kills everything | <ul style="list-style-type: none"> • Uses fuel that may be scarce • Water can get re-contaminated after boiling when it is poured into another storage container • Not ready for immediate drinking, must be cooled |
| Solar Disinfection | <ul style="list-style-type: none"> • Very cheap • Effective • Easily available | <ul style="list-style-type: none"> • Takes a long time to treat the water- 6 hours in the sun • Takes even longer if it is not a sunny day – 2 days |
| Chlorine (hypochlorite solution) | <ul style="list-style-type: none"> • Very effective • Leaves a germ-killing residue in water • Easy to use | <ul style="list-style-type: none"> • Product might not be easily available |
| Filters | <ul style="list-style-type: none"> • Effective • Easy to use | <ul style="list-style-type: none"> • Product may be too costly • Product may not be easily available • Filter must be properly maintained and cleaned |

METHOD 1: BOILING

ASK: *Who has boiled water to make the water safe?* **ASK** for a show of hands.

This, of course, is a very common method. Many people think there is nothing complex about boiling, but to make it effective, here are some important things to keep in mind.

One very important fact for you all is that to make water safe, you only need to wait for the first big bubble and then it's OK to stop.

- *Water needs to be heated until LARGE BUBBLES appear, not just the small bubbles on the side of the container.*
- *After the big rolling bubbles appear, you can stop boiling.*

The biggest challenge to boiling is to:

- *Take care not to recontaminate the water once it has been boiled.*
- *Cover the water while cooling. It takes longer, but keeps it safe.*
- *When cool enough, transfer to another clean container.*
- *Place boiled water in a secure storage container, preferably with a lid and spigot to avoid recontamination. If the water is stored and served properly, it is safe to drink for 24 hours after it is treated. After 24 hours, the water needs to be replaced with newly boiled water.*
- *Do not add "new" boiled water to "old" boiled water. Completely empty your storage container of "old" boiled water before adding a batch of "new" boiled water.*

Use "old" boiled water for household work like washing dishes, handwashing or for watering the garden or boil it again for drinking.

METHOD 2. Solar Disinfection

1. **TELL** the group that the cheapest way to disinfect water is to use the sun.
2. **ASK:** *Does anyone know how to treat drinking water using the solar disinfection (SODIS) method. If yes, ask them to describe, USING YOUR SAMPLES AS YOU TALK*

Together look at Job Aid #10 : How to Practice Solar Disinfection

3. Make sure the main points are covered in your discussion on solar disinfection:
 - *Use transparent plastic water or soda bottles that are 1-2 liters in size. Make sure the lid of the bottle closes and the bottle does not leak.*
 - *Clean the inside and outside of the bottles by filling with water and a little bleach or soap... shaking vigorous, and rinsing.*
 - *Fill the bottle 3/4 of the way with non-turbid or "chocolatey" water.*
 - *Shake the bottle for about 60 seconds.*
 - *Fill up the bottle completely and screw the cap back on.*

- Place the bottles on a flat surface and make sure they are exposed to the sky, unblocked.
- In bright sun, the water is “treated” in 6 hours. If there are 50% or more clouds, keep water exposed to the sky for two days, even if the sun isn’t shining. Solar disinfection is NOT effective in the rain.

The next 2 methods require products for purchase.

EFFECTIVE METHOD 3. Chlorine

ASK: Who is familiar with WaterGuard or AquaTabs [or insert local brand]?

Usually these tablets are formulated with the most common water containers in mind.

HOLD UP the bottle and show the two size options on the WaterGuard and the dosage on the AquaTabs.

The advantage about chlorination is that it KEEPS re-treating the water for 24 hours. It’s cheap, even for people without a lot of money. If mixed correctly, treated water should have NO smell or taste.

SAY: *It’s like medicine for water... It’s very important to make sure the expiration date has not passed, and to follow the instructions exactly... adding enough but not too much!*

The biggest disadvantage is that it’s NOT available all the time, especially in rural areas.

ESSENTIAL WASH ACTION SAFE STORAGE AND TREATMENT OF HOUSEHOLD DRINKING WATER

- Collect drinking water from the safest, protected source available.
- Treat drinking water with an effective treatment method.
- Store drinking water in a covered container and raised off the floor. If possible, use a container with a spigot or tap, a narrow opening or narrow neck to protect the water by encouraging pouring, and restricting hands from entering.
- Extract water by pouring into a cup or vessel. If no tap, use a dedicated ladle/dipper that hangs on the wall.
- Drink from a clean cup.
- If treated water is limited, prioritize giving safe water to children under 2, the elderly, pregnant and nursing mothers, and sick householders.

EFFECTIVE METHOD 4. Filters

Water filters have a lot of pros and cons, both strong and negative points.

There are a lot of fake filters sold on the market, filters that claim to be effective, but are essentially just a big container. The first and most important step is to be sure the brand is known to be effective. Some countries have a 'seal' of approval, but others don't.

An effective filter has many advantages, including a built-in dispenser.

But they are expensive, and filters need changing or they no longer clean the water.

It's important to distinguish that 'filtering' water through a cloth can make it CLEARER but does not make it CLEANER!

CONCLUDE by summarizing the key points, uncovering the flipchart you made in advance. You can have one participant read bullet, if time. Make it fun!

- Even water that is safe at the well can become contaminated,
- Clear water is not always CLEAN water.
- Water can become contaminated while carrying, storing, or retrieving it.
- The best way to carry water is in a covered container.
- The best way to store water is in a covered container with a spigot (tap).
- The best way to retrieve water is to use the spigot or pour it out.
- Never dip a bowl, cup, or your hands into the container with your treated water because you can easily re-contaminate it.
- Always serve water using a clean container.

ASK participants to: *Bring out the Essential WASH Actions sheet, and review the EWAs for SAFE STORAGE AND TREATMENT OF HOUSEHOLD DRINKING WATER*

Handout C: Small Doable Actions to Keep Water Safe

| Steps in the Water Safety Chain | Small Doable Actions |
|--|---|
| <p>Supply of Water Animals wander to drink, defecate near source</p> <p>Water collectors often put unclean hands into containers when collecting</p> | <p>Protect the source: If a well or standpipe</p> <ul style="list-style-type: none"> • Build a fence so animals cannot defecate nearby • Build a raised platform and/or a soak pit • Wash hands with soap before collecting water • Do not put hand into container when collecting <p>If an open source or stream:</p> <ul style="list-style-type: none"> • Assure no animals or humans defecate upstream |
| <p>Transporting Water Hands get into the container while carrying</p> <p>Tops of jerry cans get lost</p> | <ul style="list-style-type: none"> • Use a narrow neck container • Cover container • Attach cover to jerry can with a string so it doesn't get lost/stolen. • Punch small hole in center of top. Thread with string and knot. • Tie other end of string to neck of container short enough so top doesn't touch the ground • Make a top with a clean potato or other object that can be washed |
| <p>Storing Water Water sits on floor, flies, animals children stick hands inside</p> | <ul style="list-style-type: none"> • Maintain water in covered container • Raise container off floor |
| <p>Serving Water People dip a dirty cup to extract water</p> <p>Unwashed hands touch water</p> | <p>If no spigot on container:</p> <ul style="list-style-type: none"> • Pour water into serving jug or directly into cup for drinking • Make a simple dipper/ladle for serving from calabash or can and stick. Hang on wall. |

Handout D: Advantages and Disadvantages of Water Treatment Methods

| Treatment Method | Advantages | Disadvantages |
|--|--|--|
| Boiling | <ul style="list-style-type: none"> • Every home has a place to boil water • Cheap (if fuel is cheap) • Effective—boiling kills everything | <ul style="list-style-type: none"> • Uses fuel that may be scarce • Water can get re-contaminated after boiling when it is poured into another storage container • Not ready for immediate drinking, must be cooled |
| Solar Disinfection | <ul style="list-style-type: none"> • Very cheap • Effective • Easily available | <ul style="list-style-type: none"> • Takes a long time to treat the water- 6 hours in the sun • Takes even longer if it is not a sunny day – 2 days |
| Chlorine (hypo-chlorite solution) | <ul style="list-style-type: none"> • Very effective • Leaves a germ-killing residue in water • Easy to use | <ul style="list-style-type: none"> • Product might not be easily available |
| Filters | <ul style="list-style-type: none"> • Effective • Easy to use | <ul style="list-style-type: none"> • Product may be too costly • Product may not be easily available • Filter must be properly maintained and cleaned |

Session 5: WASH and Food Hygiene

Session Learning Objectives

By the end of the session participants will be able to:

1. Explain why WASH matters to keep food safe
2. Describe the food chain and how contaminants can get into the process
3. Describe practices that lead to food contamination
4. Identify small doable actions to improve WASH behaviors for food preparation and storage

Materials

Job Aids (see below)

Preparation

- Read Document D to be familiar with key concepts and be prepared to answer participant questions
- Review the lesson plan to be familiar with the flow and exercises
- Prepare 4 horizontal flipchart sheets for 4 groups plus one to post for large group, titled “Food Chain” plus one word on each): 1. Production, 2. Preparation, 3. Eating, and 4. Storage (with space under each for writing)
- Draw a vertical line down the middle.
- Re-post the F Routes diagram from session 1

Time (60 minutes)

- A. The Link between WASH and Safe Food (10 minutes)
- B. Why Keep Food Safe?? (5 minutes)
- C. Understanding the Food Chain, and How to Avoid Unsafe Food (25 minutes)

Job Aids to Review within Session

Job Aid 14: SDAs for Keeping Food Safe: Food Handling and Preparation

Job Aid 15: SDAs for Keeping Food Safe: Serving and Food Storage

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instruction
- *Printed in italics should be stated out loud.*

ESSENTIAL WASH ACTION

HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

(and related behaviors)

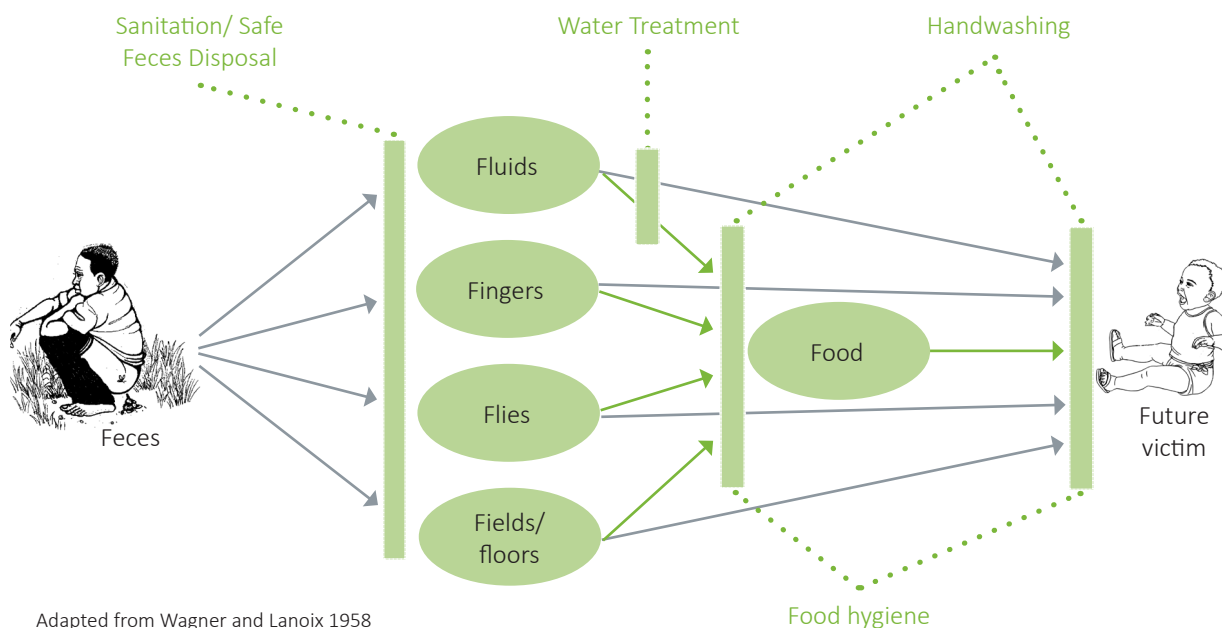
- Install a dedicated hand washing station with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and the toilet. Designate responsibility within the family to make sure it is maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children. This is the most important time to wash!
- Wash hands with soap and water after going to the latrine/toilet and after cleaning the child's feces; after handling animals or dung or working in the field. This is also a key time for washing.
- Wash young child's hands regularly, especially when visibly dirty and before mealtime.

Trainer Steps: WASH and Food Hygiene

A. The Link between WASH and Safe Food (10 minutes)

1. **ASK** the participants to think back to the F routes. **POINT OUT** diagram posted on the wall. **ASK** where there are opportunities for feces to enter the food we eat.

Blocking the Contamination Cycle (Using the EWAs to Block the Cycle)



Adapted from Wagner and Lanoix 1958

Possible answers include:

- The cook's hands are not washed and touched feces and then the food.
- Flies land on feces and then fly over to uncovered food items.
- Water used to make a dish is already contaminated with feces.
- Vegetables are on the ground when feces got into the soil, and aren't washed before adding to the dish.

DISCUSS participants' answers. Continue until there is an example for each "F".

B. Why Keep Food Safe? (5 minutes) Mini-lecture

INTRODUCE THIS NEW IDEA: In addition to feces getting into food, there are other things that can make food unsafe and make our families sick.

Keeping food safe can be challenging in 2 ways. First, we need to make sure that feces don't contaminate the food, through improperly washed hands, contaminated water, or surfaces.

Second, we need to make sure we don't allow food to become a 'vehicle' for transmitting virus, parasites, bacteria. These dangers are all invisible, but they cause sickness like

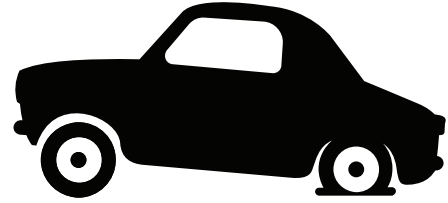
diarrhea or worse. Just like a bus, food can transport viruses and parasites, creating an unintended danger to the household members who eat.

ASK: Would you choose to ride on a bus or taxi you KNEW was going to get a flat tire, delay you on the road, or even worse, was going to crash?

Anyone? Of course NOT!!

Well it's the same for unsafe food.

You'd never intentionally give your family food that wasn't safe... you just don't always know the hazards you can't see.

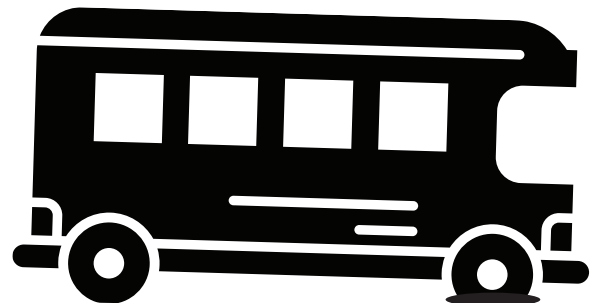


In this next exercise we'll try to make these hazards more obvious, and learn what can be done about them to make food safer.

If food is not handled safely, it can serve as a vehicle for viruses and parasites to infect the unknowing diner. Just like a bus, it CARRIES invisible living things that can make us sick, some instances VERY sick.

That's a lot of words to say the food carries invisible passengers that can be harmful – what we call virus and parasites.

And it gets worse! For many bacteria, food offers an opportunity to grow and multiply a lot! ... to amounts that can cause harm.



Water also is a key part of safe food, playing an important role at multiple points in food preparation, including washing ingredients, rinsing utensils, cooking, and handwashing (or not).

By the time we finally eat the food, **it is difficult to know whether it was the food itself, feces that got into it... or the contaminated water causing the sickness, but that really doesn't matter, it still makes us sick, our families and especially our children.**

ASK: Any questions or comments before we continue?

C. Understanding the Food Chain, and How to Avoid Unsafe Food (25 minutes)

1. **SAY:** the food chain is the process of:
 - food production (growing/raising the food)
 - preparing or cooking the food
 - eating the food
 - storage both before and after cooking

POINT to the posted flipchart: Production, Preparation, Eating, and Storage

2. **SAY:** *Before our group exercise, let's look at the food chain for a raw food. Let's take the example of preparing a dish of cucumber salad. [Note: if this is not a common dish, substitute a common food that is not cooked, and eaten RAW.]*

The first step in the food chain is raising the vegetables, which we call PRODUCTION ... which includes how we fertilize and water the vegetables in the field, and how we harvest it. Alternatively, people might buy vegetables in the market.

Once we have the vegetable in the kitchen, we take a knife and board to prepare the vegetables. Do we wash them first? What else is on the cutting board with the vegetables, or what was there before? Is there raw meat on the same board?

Okay, you get the idea.... We're breaking down the many steps of the food chain so we can then look closer at where it can be exposed to things that make it unsafe. Finally, we'll review the EWAs that help keep food safe.

Now – as an exercise -- we'll think through the food chain for a meal with different dishes.

3. EXERCISE

DIVIDE participants into 4 groups, and assign each group one of 2 dishes in a meal:

- cucumber salad (or other raw salad)
- grilled chicken legs

HAND OUT prepared flipchart sheets and markers and tape.

EXPLAIN that the activity will be in 3 steps. Steps 1 and 2 will be done together:

First, take 5 minutes to brainstorm the different steps of the production for your group's food—either salad or “grilled chicken leg”.

Second 2, as a small group, back and review each step, and place a check mark in the chain where food might get contaminated.

Write the steps in the left side of the flipchart/ Save the right side for the next part of exercise

Put a check next to the step if food might get contaminated at this step.

You have 10 minutes steps 1 and 2 of the exercise.

After 10 minutes - CALL the group's attention after 10 minutes, but have them stay in their groups.

Step 3: Staying in small groups, ask participants to return to their flipcharts, and review each check marking the many possible places the food can get contaminated.

For each checked item, ask groups to identify 'small doable actions' that will help to keep food safe, and note these actions on the right side of the sheet.

Give an explanation, if necessary: When we think back to our example of making the cucumber salad,

On the preparation step of chopping vegetables on the board...

A small doable action to protect the food is to WASH the cutting board and knife with soap and water, or bleach if available, before cutting.

They have 10 minutes for Step 3. Bring the groups back together to debrief. Then continue with this mini-lecture

REMINDER

A small doable action is one that is feasible from the householder point-of-view, but still effective in reducing contamination and risk.

Trainer notes:

Be certain that the participants' answers are small doable ACTIONS not "messages".

C. How to Keep Food Safe/ REVIEW OF THE EWAs and JOB AIDS (15 Minutes TOTAL)

If we think of this chain from production through eating or consumption and storage as a continuous chain or cycle, we need to examine FIRST the points along the chain where food can get contaminated, and then identify KEY PLACES to keep food from getting contaminated. You did this in step 2 or our exercise.

ASK 1 small group that used the salad as an example to come up and post their food cycle for the large group. Ask the group to review:

- *What were some of the points where vegetables are exposed to feces?*
- *What can reduce risk of contamination?*
- *How can contamination be removed altogether?*

ASK a second group that used chicken as an example to come up.

POST their sheet next to the sheet for salad.

ASK the group to review:

- *What were some of the points where meat is exposed to feces?*
- *What can reduce risk of contamination of meat?*
- *How can contamination be removed altogether from meat?*

ASK the entire group to review the 2 flipcharts together. What do they notice? What is similar and what is different?

Guide the discussion to elicit the ability to cook chicken to remove possible contamination (but not salad).

POST a third flipchart sheet next to the other two. **ASK** the large group to look at both lists together and imagine that they were preparing the two dishes at the same time. Where are

there points in preparation when the chicken could contaminate the cucumbers, or vice versa. Write responses on the third flipchart.

ASK for small doable actions to reduce the chance of cross-contamination.

Possible responses:

- Use different utensils
- Use different cutting surface
- Wash meat utensils and cutting board with water and soap or bleach before using again
- Store raw meat in a bowl or container that can't leak onto other foods
- Do not use the same rag for meat juice and other raw items that will never be cooked.

SAY: By examining your processes and identifying the points where something could go wrong – one can identify protective behaviors to avoid serious illness and even death.

These are small doable actions. But what's different here is that this is a CHAIN.

Yes, there are so many places where food can get contaminated, so we need to just choose a few. So let's look at the ESSENTIAL WASH ACTIONS for HYGIENIC HANDLING AND SAFE STORAGE OF FOOD (FOOD HYGIENE)

REFER TO EWAs.

PASS OUT and review job aids.

SAY: let's look at the Essential WASH Actions for keeping food safe and review.

You can see that we focus on a FEW CRITICAL CONTROL POINTS, just a few essential actions, that will help protect food throughout the cycle.

How do these compare to your exercises?

ASK: How does the essential actions on this job aid compare to the SMALL DOABLE ACTIONS you came up with??

DISCUSS.

Small Doable Actions that Serve as Critical or KEY Control Points

'Critical control points' are about looking at every stage in the food chain process, whether it's food production, preparation, and eliminating risk factors.

Trainer notes:

It is important to stress that if food might get contaminated early in the chain, but then 'made safe' through thorough boiling or other means, then it is not a critical control point.

A critical control point is a point on the chain where food can be kept from being contaminated, that won't be corrected or made safe later on...

ESSENTIAL WASH ACTION

HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

(with associated behaviors)

- Cook and reheat all hot food until boiling or steaming throughout.
- Do not eat food that has been sitting at room temperature without reheating until boiling or steaming.
- Dispose of all food that smells or looks spoiled.
- Store food in the cleanest and coolest location possible, out of the sun. Cover all stored food from flies and animals.
- Wash foods to be eaten raw with treated water, and prepare these foods on freshly washed surface with clean utensils.

Wash cooking and serving containers and utensils before use, with flowing water* and soap.

WRAP UP (5 minutes)

1. **TELL** the participants that *by identifying just a few SMALL DOABLE ACTIONS that are CRITICAL CONTROL POINTS within the food chain, you can prevent contamination of food so it won't make the family sick.*
2. **WRAP UP** by reminding participants it is important to change behaviors around food safety, and that small doable actions are possible to move towards the ideal situation. The job aid is designed to help them negotiate small doable actions. There may be other small doable actions for particular household situations.

*Flowing water can run or be poured from a tap, pitcher, cup, or jug. The key actions is to have water rinse over hands or food. Dipping into still water is never acceptable for washing.

Session 6: Separating Infants and Young Children From Soil and Animal Feces

Session Learning Objectives

By the end of the session participants will be able to:

1. State the dangers of eating soil and chicken feces to our children's health
2. Discuss options for keeping their child separated from animal feces and soil, including the benefits of using a play area or mat for her child.

Materials

- Flipchart, markers, and tape
- Handout E: What Did Your Child Eat Today??
- Picture of cow and of chickens
- Prepared sheets of paper with word CORRALS and PLAYPENS
- Re-post the F routes diagram from session 1
- Job Aids (see below)

Preparation

- Read Document E to be familiar with key concepts and be prepared to answer participant questions
- Review the lesson plan to be familiar with the flow and exercises
- Prepare flipchart sheets for each small group, each with 2 columns: 1 column labeled Risks, the other Small Doable Actions
- Picture of Chicken and Cow
- Prepare 2 sheets of paper with word CORRALS and PLAYPENS

Time (60 minutes)

- A. Story: Do You Know What Your Child Ate Today?? (15 minutes)
- B. Small Doable Actions to Protect Infants and Young Children from Animal Feces and Soil (30 minutes)
- C. Debrief and Wrap Up (15 minutes)

Job Aids to Review within Session

- #16 Cleaning the courtyard and safely disposing of feces
- #17 Separating IYC from animal feces and soil

EWA and behaviors to be reviewed**ESSENTIAL WASH ACTIONS**
SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES
(with associated behaviors)

- Separate children from animal feces, keeping a physical barrier as possible between IYC and animals and their feces.
- If using a playmat, clean and sanitize weekly or whenever visible dirt or feces.
- Separate livestock/domestic animals and their feces from cooking and sleeping areas, and where young children are commonly on the ground.
- Sweep household compound daily or whenever feces are visible to keep animal feces out of the indoor and outdoor living areas.
- Place any animal feces that will be used as fuel, fertilizer or building material into a raised area or deep pit, covered and away from the reach of IYC and flies.
- Place animal feces with no future use in latrine or isolated rubbish pit.
- Wash IYC toys and playmat weekly or when feces or dirt are visible.

Trainer Steps

Start the session by acknowledging that the last two sessions were very heavy, lots of lecture, and we are going to end with the last session on WASH... and it starts with a story.

STORY: Do You Know what your child ate today??¹ (15 minutes)

PASS OUT HANDOUT E. If participants can read easily, go around the room and have each person read one paragraph. If this is challenging, the trainer should read the whole story to the group.

Trainer notes:

- Printed in **bold** and all **CAPS** are trainer instructions
- *Printed in italics should be stated out loud.*

¹Full credit to the SHINE Study WASH Interactive Tools (2014) for the idea of this story, developed by Zvitambo Institute for Maternal and Child Health Research, Harare, Zimbabwe

Mbuya, M. N. N., Tavengwa, N. V., Stoltzfus, R. J., Curtis, V., Pelto, G. H., Ntozini, R., ... Humphrey, J. H. (2015). Design of an intervention to minimize ingestion of fecal microbes by young children in Rural Zimbabwe. *Clinical Infectious Diseases*, 61(Supplement 7), S703–S709. <https://doi.org/10.1093/cid/civ845>

Handout E: What Did Your Child Eat Today?

Mrs. Moyo comes back to her compound after collecting water. She takes her six-month child Precious off her back and puts her on the ground while she unloads the firewood and checks around the compound. She is tired already just thinking of all the chores ahead of her this afternoon, and decides to get started. Mama Moyo washes the baby nappies that have been soaking while she was out... and throws the nappy water near Baby Precious making Precious clap her hands with glee! Whosh!

Precious is getting stronger by the week, and she crawls over with her favorite baby doll to the puddles and begins to play... slapping the water, making it a game, exploring. She grabs some of the dirt, and puts it in her mouth, and wipes the rest on her shirt. Baby giggles and does it again, this time feeding some to her doll. The chickens play all around the yard, and she tries to chase one, but isn't yet a fast-enough crawler to catch the energetic bird.

Baby Precious settles back down, and explores the ground around her, picking up everything in reach. She takes a chunk of chicken poop that dried in the sun and puts it in her mouth, swallows it... and then looks around for more. She finds a pebble and puts that in her mouth too, but spits it out. Bleh!

Mrs. Moyo is busy peeling cassava, and is relieved to see her sister Juliet come back from the field where she has been all morning. Juliet can help watch the baby. As her sister walks toward the house, Mrs. Moyo shouts after her... I just swept.. make sure you clean your muddy shoes before you go inside! Her sister Juliet sits on a stool by Baby Precious, takes a stick from the woodpile, and gets all the mud off her shoes. She sings to Precious and tells her she'll be back after she goes inside.

Precious is delighted at all the new things to explore... chunks of dirt from Juliet's shoes, plastic containers, all sorts of things to explore like babies love to do. While her mom is busy in the courtyard, she takes a few more tastes from the treats in the dirt... crawls into the shade, and takes a nap beside the chickens and the dog.

Mrs. Moyo is ready to start cooking the cassava.... She readies the fuel for the fire, taking a dung cake drying in the sun. She calls her sister, who comes from behind the house wiping her hands on her skirt. Juliet picks up Precious' toy from the yard, and puts it on the ground beside where she is sleeping goes to help her sister with the cassava.

ASK:

How did you like the story??

What did you notice??

Let's list some of the things Precious put into her mouth.

Possible answers include:

- chicken feces
- mud/dirty water
- soil from the field
- pebbles
- toys
- her fingers

WRITE the answers onto a flipchart. Keep asking, *anything else??* until the list is complete

ASK:

Is this common behavior for a young child??

Is it safe for Baby Precious to put these things in her mouth?

Is it safe to eat what she ate??

Why?

Make certain to underscore the danger of mouthing and eating animal feces and soil. Eating soil and feces can bring diarrhea and worms. Even without diarrhea, eating both human and animal feces can stop a child from growing well, from reaching her full potential!

SAY: *As we can see, there are many ways that animal and human feces work their way into children's mouths and into their food and water.*

We've discussed some of the ways already. Now we're going to look closer at other ways out children end up ingesting animal and soil feces, even though a mother would never intentionally SERVE this to her child.

This session will help to make us more mindful of where danger lurks, of where feces may be in our compounds.

But most importantly, we discover some options to reduce the amount of animal feces and dirt that makes its way to our children's mouths.

B. Small Doable Actions to Protect Infants and Young Children from Animal Feces and Soil (30 minutes)

SAY: *Remember the small doable actions? Let's break into groups and try to come up with a few small doable actions that will separate infants and young children from dirt and animal feces.*

DIVIDE PARTICIPANTS into groups of 5. Give each a prepared flipchart sheet, markers and tape. They should write the risky practices on one half of a paper, and some small doable actions on the other side.

Start with them to list the risky practices

ASK:

Now let's think what we could do to avoid risk of coming into contact with animal feces and soil.

You have 15 minutes for this exercise.

On the left side of your sheet, write the risks to small children, such as Precious. On the right side, list some doable actions for households. Try to find a 'small doable action', a practical and feasible solution for each of the risks.

DEFINITION of a SMALL DOABLE ACTION

A small doable action is a behavior that, when practiced consistently and correctly, will lead to personal and public health improvement. It is considered feasible or "do-able" by the householder, from HIS/HER point of view, considering their current practice, the available resources, and the particular social context.

Although the behavior may not be an "ideal practice," more households likely will adopt it because it is considered feasible within the local context.

SAY: *Let's think back to our story of Precious and Mama Moyo. One risk was*

Dirty laundry water

... so write that on the left side of the piece of the paper

ASK:

What was another risk?

Now keep listing a few more risks in your group.

SAY: *Let's look at the possible solutions together...*

REPORT OUT:

Have two groups post their flipchart and report on the risky practices, and small doable actions to protect children from eating dirt and animal feces.

Then ask if the other groups had anything very different?

ASK: *Do we see any patterns?*

Try to facilitate conversation that touches on the following:

- children need to be supervised to not eat feces-laden or dangerous objects in the yard,
- they need to be separated with some kind of boundary/ barrier from animals, that could be a playmat or play pen.... Or the ANIMALS could be penned away from the child
- hands must be continually cleaned of feces by handwashing with soap
- compounds must be kept clean of feces

ESSENTIAL WASH ACTION

SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES**

(with associated behaviors)

- Separate children from animal feces, keeping a physical barrier as possible between IYC and animals and their feces.
- If using a playmat, clean and sanitize weekly or whenever visible dirt or feces.
- Separate livestock/domestic animals and their feces from cooking and sleeping areas, and where young children are commonly on the ground.
- Sweep household compound daily or whenever feces are visible to keep animal feces out of the indoor and outdoor living areas.
- Place any animal feces that will be used as fuel, fertilizer or building material into a raised area or deep pit, covered and away from the reach of IYC and flies.
- Place animal feces with no future use in latrine or isolated rubbish pit.
- Wash IYC toys and playmat weekly or when feces or dirt are visible.

C. Debrief and Wrap Up (15 minutes)

DISTRIBUTE the job aids

REVIEW the Essential WASH Actions

REVIEW the job aids together

ASK:

- *What makes it difficult to separate children from animals?*
 - *Is it easier/better/preferable for YOU to pen up the animals?*
 - *Or to put the child in a constrained space?*
- *What makes it difficult to clean the yard of feces?*
- *What would make it easier?*
- *Would anyone disapprove if you tried any of those behaviors?*

DISCUSS.

One thing that makes it hard to keep the courtyard clear of animal feces is when the household uses the feces for fuel, for fertilizer, and for building material. When this is the case, the household doesn't need to GET RID of the feces, instead they should find ways to keep the babies and young children from getting close to the supply. Some options include a raised basket, or deep but pit that has a fence so children can't get hurt

Address other concerns, and try to come up with ways they might negotiate with households to keep children away from the harmful feces.

** Note the evidence base for effective means of reducing child exposure to animal feces and soil is not yet established and the recommended behaviors are based on consultation with area experts, available data and biologic and behavioral plausibility.

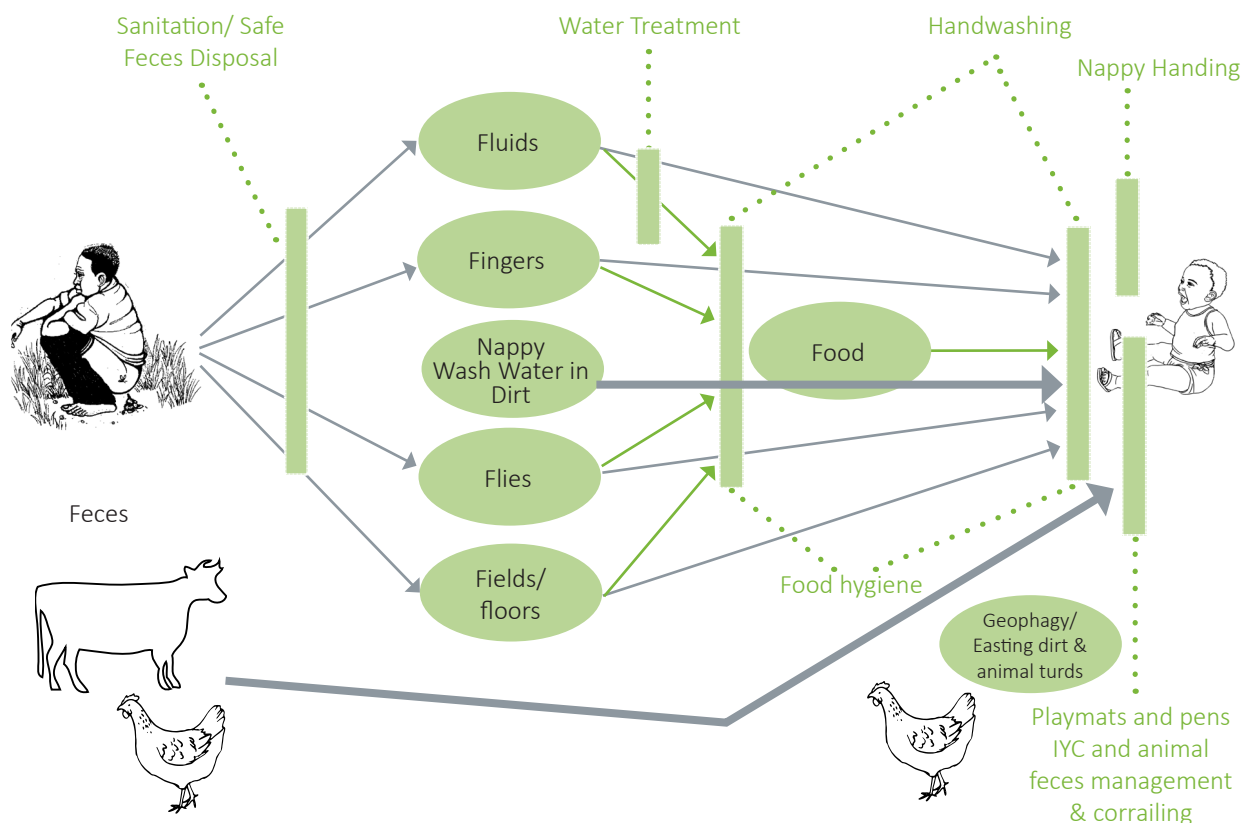
ASK:

Remember our famous F routes diagrams ?
 Where are chicken, goats, cow in this diagram?
 NO WHERE!
 Should we add them?

ADD the pictures of the cow and chickens to the posted diagram, below the man defecating in the open. Draw an arrow DIRECTLY to the child. You can then put a barrier saying CORRALS/PLAYPENS to block infants and young children from coming into direct contact with animal feces.

Note that besides getting into the food and water, children eat animal feces directly.

More EWAs - To Block the Contamination Cycle



Adapted from Wagner and Lanoix 1958

In closing!

PASS OUT HANDOUT E.

ASK everyone to look at ALL the Essential WASH Actions together.

SAY: We are completing our focus on Essential WASH Actions, and the many behaviors ... all aimed at breaking the cycle of fecal oral contamination.... To keep feces out of our food and water, and help children grow and learn well.

Have them take out the full list of EWAs.

You have a new set of tools to go out there and work with families, promoting small doable actions that make a difference.

Who is committed to try?? To work with families to practice the Essential WASH Action?! For Baby Precious, Amina, and all the infants and young children?!

Let's go forward, and do our best...

Essential WASH-Actions

SAFE DISPOSAL OF HUMAN FECES

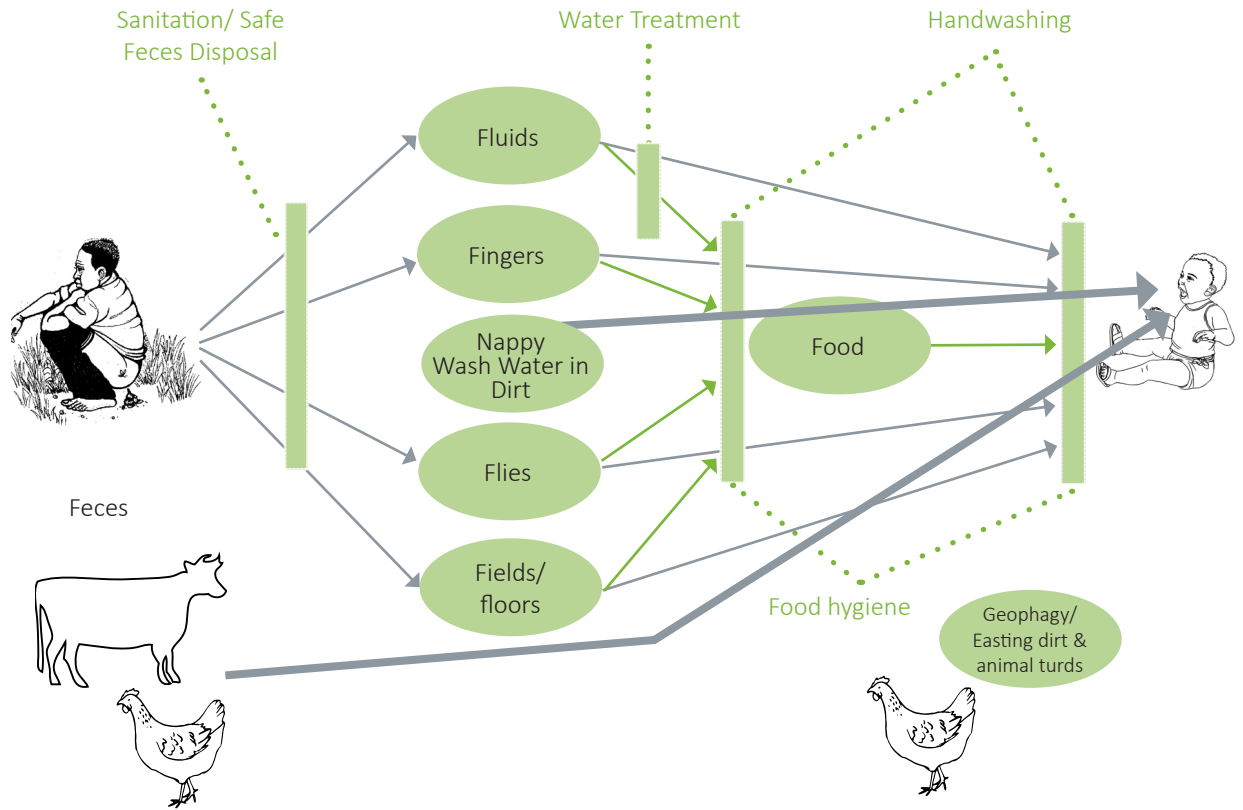
WASH HANDS WITH SOAP

SAFE STORAGE & TREATMENT OF HOUSEHOLD DRINKING WATER

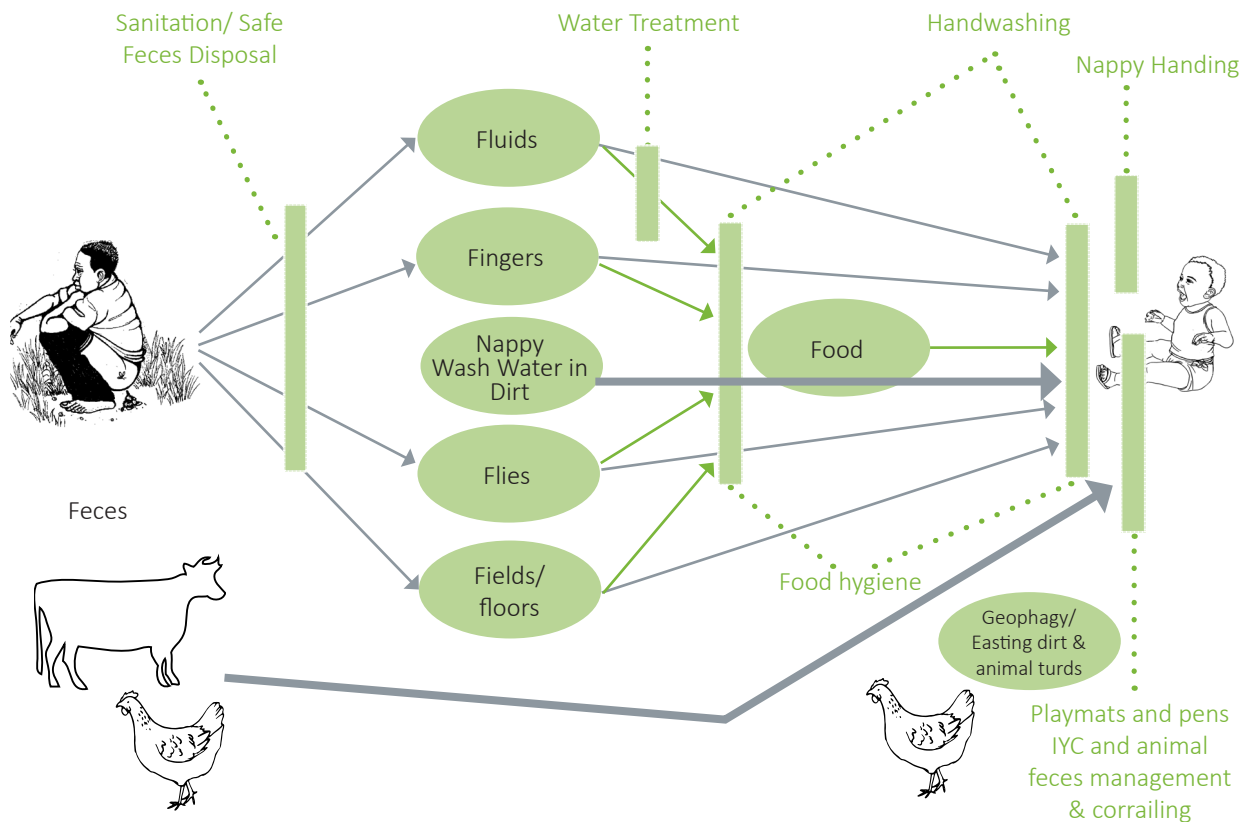
HYGIENIC HANDLING & SAFE STORAGE OF FOOD (FOOD HYGIENE)

SEPARATING CHILDREN FROM SOIL AND ANIMAL FECES

More Considerations- To Block the Contamination Cycle



More EWAs - To Block the Contamination Cycle



Adapted from Wagner and Lanoix 1958

=END=

Please let us know how you are using the materials! Connect with Julia Rosenbaum at jrosenbaum@fhi360.org.

Essential WASH Actions *(with associated behaviors)*

■ Safe Disposal of Human Feces

- Consistently use improved latrines, including child-friendly latrines and accessible latrines, to encourage all household members to use them. Place all human feces directly into the household latrine.
- Practice age-appropriate actions for safely disposing of infant and young child (IYC) feces, with intermediary steps like diapers or potties, so all feces end up in latrines.
- Fling any wash water used for cleaning children's bottoms, diaper material, and potties to disperse it, away from well sites and away from children's play areas.
- Promote universal latrine use in the community. Participate in efforts to make the community an "open defecation-free community".

■ Wash Hands With Soap

- Install two dedicated hand washing stations with flowing water and soap (such as a tippy tap) within 10 paces of the cooking area and 10 paces from the latrine. Designate responsibility within the family to make sure they are maintained with soap and water.
- Wash hands with soap and flowing water* before preparing food, before eating food, and before feeding young children.
- Wash hands with soap and water after using the latrine/toilet and after cleaning a child's feces; after handling animals or dung or working in the field. Wash young child's hands regularly, especially when visibly dirty and before each meal.

■ Safe Storage & Treatment of Household Drinking Water

- Collect drinking water from the safest, protected source available.
- Treat drinking water with an effective treatment method.
- Store drinking water in a covered container and raised off the floor. If possible, use a container with a spigot or tap, a narrow opening or narrow neck to protect the water by encouraging pouring, and restricting hands from entering.
- Extract water by pouring into a cup or vessel. If no tap, use a dedicated ladle/dipper that hangs on the wall.
- Drink from a clean cup.
- If treated water is limited, prioritize giving safe water to children under 2, the elderly, pregnant and nursing mothers, and sick householders.

■ Hygienic Handling & Safe Storage of Food (Food Hygiene)

- Cook and reheat all hot food until boiling or steaming throughout.
- Do not eat food that has been sitting at room temperature without reheating until boiling or steaming.
- Dispose of all food that smells or looks spoiled.
- Store food in the cleanest and coolest location possible, out of the sun. Cover all stored food from flies and animals.
- Wash foods to be eaten raw with treated water, and prepare these foods on freshly washed surface with clean utensils.
- Wash cooking and serving containers and utensils before use, with flowing water* and soap.

■ Separating Children From Soil and Animal Feces**

- Separate children from animal feces, keeping a physical barrier as possible between IYC and animals and their feces.
- If using a playmat, clean and sanitize weekly or whenever visible dirt or feces.
- Separate livestock/domestic animals and their feces from cooking and sleeping areas, and where young children are commonly on the ground.
- Sweep household compound daily or whenever feces are visible to keep animal feces out of the indoor and outdoor living areas.
- Place any animal feces that will be used as fuel, fertilizer or building material into a raised area or deep pit, covered and away from the reach of IYC and flies.
- Place animal feces with no future use in latrine or isolated rubbish pit.
- Wash IYC toys and playmat weekly or when feces or dirt are visible.

*Flowing water can run or be poured from a tap, pitcher, cup, or jug. The key action is to have water rinse over hands or food. Dipping into still water is never acceptable for washing.

**Note the evidence base for effective means of reducing child exposure to animal feces and soil is not yet established and the recommended behaviors are based on consultation with area experts, available data and biologic and behavioral plausibility.