Test your WASH Knowledge

1. In the Lancet Series of 2013, what percent of stunting could be averted in high-burden countries by scaling 10 nutrition-specific interventions to 90% coverage?

   a) 20%

   b) 45%

   c) 70%

   **Bonus Question:**
   What was voted the greatest medical milestone of the last century and a half?

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**Source:** A. Ferriman (2007). BMJ readers choose the “sanitary revolution” as greatest medical advance since 1940. BMJ. 2007 Jan 20; 334(7585): 111.
Test your WASH Knowledge

2. How many people in the world practice open defecation?

a) 2.5 million

b) 467 million

c) 946 million

Good news!
Ethiopia achieved the largest decrease in the proportion of the population practicing OD – reduced from 92% (44 million people) in 1990 to 29% (28 million people) in 2015 – an average reduction of over 4% per year over 25 years.

Objectives of our Session

1. The ‘Why’ of WASH
2. The ‘How’ of WASH
3. The ‘How’ of WASH-Nut Integration
Part 1:

The ‘Why’ of WASH
WASH-Nutrition Pathways

Insufficient diet → Malnutrition

which worsens → Fecal-oral Infection

which worsens → Environmental factor: the ‘F’s

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Washington, DC
WASH-Nutrition Pathways

1. Cycling of diarrhea and malnutrition
2. Parasitic infections (e.g. soil transmitted helminths, STH)
3. Gut malfunction & poor absorption of nutrition (i.e. ‘environmental enteropathy’)

And they’re not independent of one another...

Q: Can anyone think of any indirect pathways between WASH & Nutrition?
WASH-Nutrition Pathways

Water source far from home → Inadequate water storage in home → Low water quantity → Unimproved sanitation, distance to sanitation → Fecal contamination of home → Nematode infection, Environmental Enteropathy, Diarrhea → Poor nutritional status

WASH cost → High cost of water and/or sanitation services → Unprotected water source → Poor water quality → Fecal contamination of home

Less time for food preparation → Poor hand-washing

Less money for food

Source: O. Cumming, London School of Tropical Medicine and Hygiene, 2013

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**WASH-Nutrition Evidence**

<table>
<thead>
<tr>
<th>Linkage (Direct/Indirect)</th>
<th>Quality of Evidence</th>
<th>Strength of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD $\leftrightarrow$ Stunting</td>
<td>Econometric analysis/DHS</td>
<td>Strong</td>
</tr>
<tr>
<td>WASH programming $\rightarrow$ Undernutrition</td>
<td>biological mechanism</td>
<td>suggestive on underweight</td>
</tr>
<tr>
<td>Water, hygiene $\rightarrow$ Diarrhea</td>
<td>biological mechanism</td>
<td>suggestive on underweight</td>
</tr>
</tbody>
</table>

“There is sufficient evidence (from a variety of studies) of a link between WASH programming and nutritional outcomes – particularly for stunting – **to promote WASH as nutrition-sensitive interventions.**”

*Source: Latagne, 2014; Kotloff et al., 2013*
## WASH-Nutrition Evidence

<table>
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<tbody>
<tr>
<td>OD ↔ Stunting</td>
<td>Econometric analysis/DHS</td>
<td>Strong</td>
</tr>
<tr>
<td>WASH ↔ Stunting</td>
<td>Mostly observational studies</td>
<td>Suggestive</td>
</tr>
<tr>
<td>Water, hygiene ↔ Stunting</td>
<td>Experimental</td>
<td>Suggestive- modest effect</td>
</tr>
<tr>
<td>WASH ↔ Underweight</td>
<td>Observational studies-evidence</td>
<td>Suggestive</td>
</tr>
<tr>
<td>Diarrhea ↔ Undernutrition</td>
<td>Substantial evidence; inconclusive on stunting</td>
<td>Suggestive on wasting; contribution to stunting?</td>
</tr>
<tr>
<td>Environmental Enteropathy ↔ Undernutrition</td>
<td>Substantial evidence-biological mechanism</td>
<td>Strong on stunting; suggestive on underweight</td>
</tr>
</tbody>
</table>

*Source: Latagne, 2014; Kotloff et al., 2013*
Exercise: Why WASH?

Group Exercise

1. Groups of 3-5 people
2. You have 5 minutes to develop a convincing argument to pitch to a stakeholder (e.g. mission director; AOR; Nutrition Program lead) on why you should integrate WASH into a nutrition program
3. Each group will have 3 minutes (timed!) to pitch your argument. Props are welcome!
Part 2: The ‘How’ of WASH
Routes For Pathogen Exposure

Sanitation and Clean Environment

- Feces
- Fluids
- Fingers
- Flies
- Fields/Floors

Safe Drinking Water (collection, transport, storage, treatment)

- Food
- Handwashing and Food Hygiene

Source: revised from WSP, 2012

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High Impact WASH Interventions

- Safe Feces Disposal
- Handwashing With Soap
- Drinking Water Supply
- Drinking Water Treatment & Safe Storage
- Food hygiene

Each of these can reduce diarrhea by at least 30% in children under five living in unhygienic conditions.

Actual reduction depends on correct, consistent and sustained adoption of the behavior.
WASH Sustainability: Rural Water

Lack of community organization, commitment and capacity to adequately design and site system, maintain technology, and protect water source.

Rural Water Borehole with Manual Pump
WASH Sustainability: Sanitation

Giving away latrines does not work

Increase WASH-Health Knowledge → Motivating idea/emotion (e.g. disgust; pride) → Generate Demand → Improve supply & technical capacity → Sustainable Sanitation

Demand-driven sanitation should facilitate options & improvements.
Sustainable WASH is achieved when country partners and communities take ownership of the service and there are local systems to deliver inputs needed to maintain results and deliver impacts beyond the life of project funding.
# WASH Sustainability

## Ex-post evaluation of FFP WASH Interventions

**3-5 year ex-post**

<table>
<thead>
<tr>
<th></th>
<th>Improved</th>
<th>Sustained</th>
<th>Deteriorated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to improved latrine</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Access to improved water source</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Households purifying water</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Households with handwashing observed</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

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## Example: Safe disposal of feces

<table>
<thead>
<tr>
<th>Technical</th>
<th>Governance/Institutional</th>
<th>Social/Behavioral</th>
<th>Financial</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate latrine options</td>
<td>National sanitation policies</td>
<td>Attitude changes – CLTS, messaging aspiration</td>
<td>Social marketing</td>
<td>Water sources (quantity and quality)</td>
</tr>
<tr>
<td>Supply chains</td>
<td>Financing structures</td>
<td>Contest for “healthy families”</td>
<td>Voucher system</td>
<td>Contamination</td>
</tr>
<tr>
<td>Trained technicians for installation/repair</td>
<td>Community governance</td>
<td>Habit formation</td>
<td>Micro-finance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health Agents</td>
<td>Engage women AND men</td>
<td>Public private partnerships with manufacturers</td>
<td></td>
</tr>
</tbody>
</table>
Exercise: Sustainable WASH

1. Table groups

2. Each group will look at a “death spiral” of a water or sanitation service

3. Identify an intervention for each step along the spiral that could halt or reverse the negative spiral of poor services (7 minutes)

4. Extra credit if you identify an intervention that would help resolve multiple steps of the spiral!
Exercise: Sustainable Rural Water Supply

1. The community has very limited access to water. They use a stream that is 5 Km away.

2. A donor offers to provide water and its consultants select the site. A borehole is dug and a pump installed.

3. The consultant conducts a community meeting, trains a community member he selects and leaves a manual.

4. A neighboring community hears about the water and women come early in the morning to get water. This creates conflict.

5. Something goes wrong with the pump. The trained community member thinks a part is needed. No one has money for the part.

6. Money is slowly raised, but people question whether all families have to pay the same amount.

7. Meanwhile the trained community member has left for another town.

8. No one else is sure what part to get or how to fix the pump.

9. Women and girls have started to use the stream again.

The Donor brings the Ambassador on a site visit. The donor pledges to bring the same team back to fix the pump.
In Summary...

WASH Infrastructure ≠ Access to service

Access to service ≠ Sustained service

Sustained service ≠ Anticipated health, economic and other benefits from investments
Part 3: The ‘How’ of Integration?

Some other ways:
- Joint design?
- Joint budgeting?
- Interdisciplinary teams?
- Consolidate reporting?

From the new WHO-USAID ‘Practical Solutions’ publication: www.who.int/water_sanitation_health/publications/washandnutrition/en/
A whole spectrum of implementation modes

**Guiding Questions:**

- What are the big gaps and sustainability challenges in the country for WASH and Nutrition?
- What are the Mission’s objectives for WASH and Nutrition?
- What are the potential points of overlap between the desired WASH and Nutrition objectives?
- What are the governance structures (institutional frameworks) for WASH and Nutrition in the country?
- What are the WASH and Nutrition capacities of the potential implementing partners in the country?
- What are the current flavors of funds available to the mission for WASH and Nutrition programming?
Potential Integration Points

Schools (kids as catalysts)

Agriculture & Livelihood Activities
Integration Example

**Nutrition**
- Exclusive breastfeeding for the first 6 months
- Continued breastfeeding with complementary feeding
- Dietary diversity
- Use of family food

**WASH**
- Handwashing
- Food hygiene
- Household water treatment
- Build and use hygienic latrines, including for disposal of child feces

- Training health care workers and community members
- Social mobilization/mass media
- Work with private sector to ensure product availability
- Demonstrations – cooking & handwashing
Resources

Online resources

- www.washplus.org/wash-nutrition
- www.who.int/pmnch/knowledge/publications/summaries/ks30/en

- USAID Water Update (internal)
- Global Waters (external)
- USAID Webinars & training
- WASH Advisors at USAID/W & Missions
Questions?

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