WASH in Schools for Comprehensive Control of Intestinal Worms

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September 9, 2010
Lack of water and sanitation remains a major cause of transmission of NTDs

<table>
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<th>NTD</th>
<th>Description</th>
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| **Trachoma**         | • Endemic in 57 countries  
• 41 million people infected worldwide  
• Leading cause of preventable blindness  
• Spread by flies that breed in human feces and feed on discharge on children’s faces |
| **Schistosomiasis**  | • Found in 74 countries  
• 200 million people infected worldwide  
• > 600 million at risk of infection  
• Associated with renal and bladder dysfunction/liver and intestinal disease  
• Infection occurs when humans enter contaminated water to bathe, wash clothes, fish, etc.  
• Transmission cycle perpetuated when infected person urinates or defecates in community water sources |
| **Soil-transmitted Helminthiasis (STH)** | • 1.2 billion people at risk of infection  
• 800 million are children < 15 years old  
• Inhibit absorption of nutrients, leading to stunted growth, impaired cognitive ability.  
• Helminth eggs released into the soil through infected feces. Cycle of infection continues when others ingest contaminated foods or do not wash hands prior to eating |
Public-Private Partnerships for NTD Control

- Johnson & Johnson
  - mebendazole
- Pfizer
  - azithromycin
- Merck
  - ivermectin
- GSK
  - albendazole

Task Force for Global Health

- Children Without Worms (CWW)
  - STH
- International Trachoma Initiative (ITI)
  - Trachoma
- Mectizan Donation Program (MDP)
  - LF
  - Onchocerciasis

WHO
Multisectoral Collaboration for STH Control

- Johnson & Johnson
- Task Force for Global Health
- World Health Organization (WHO)
- Ministry of Health (MoH)
- Ministry of Education (MoE)
- NGOs
- Mebendazole Advisory Committee (MAC)
- Children Without Worms (CWW)

Partnership for Treating and Preventing Intestinal Worms
Deworming Alone is NOT SUFFICIENT

• **Regular Mass Deworming**
  - Easy to administer
  - Inexpensive
  - Safe
  - Effectively reduces intensity and prevalence of infection

• **BUT concerns re:**
  - Cost
  - Mass treatment fatigue
  - Risk of drug resistance
  - Sustainability
Call for Comprehensive Control of STH

WASHED

**Water**
Promotes:
- washing hands after defecation and before eating
- washing/boiling vegetables prior to consumption

**Sanitation**
Reduces contamination of soil with feces containing helminth eggs by increasing access to sanitary latrines to discourage and decrease open-defecation and unsafe disposal of feces

**Hygiene Education**
Promotes hygienic practices such as hand washing, wearing shoes, cooking vegetables, proper use of latrines to reduce risk of infection

**Deworming**
- Keeps the intensity of infection below the threshold that can cause disease
- Cures acute symptoms
- May also reverse the negative effects of chronic infections on nutrition, growth, and children’s school performance (WHO, 1996a)
Expansion of Partnerships for Comprehensive STH Control

Ministry of Water/Environment

- Set policies that mandate all schools to include latrines and hand washing facilities
- Join school health taskforce

NGOs

- Prioritize areas of high STH (NTD) prevalence for WASH interventions
- Use deworming days as platform for messaging

Private Sector

- Sponsor local school WASH programs
- Provide building materials at affordable prices/free

Academia

- Monitor impact of WASH interventions on NTDs
- Identify best practices
Thank You

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