

Healthy Pequeños Comprehensive Pediatric Infection Prevention Program Guide

PART 1: PATHOGEN EXPOSURE REDUCTION

Water: absence of pathogens in water sources through provision of adequate water supply systems, water storage systems, systems for the improvement and preservation of water quality, and wastewater drainage.

- Attention to: Presence of tap, pump or tank. Appropriateness of the design and accessibility for small children. Condition of the water source. Availability of water for flushing latrines, hygiene, handwashing, and drinking water. Maintenance arrangements (including availability of spare parts).

Sanitation: reduction of pathogens in environment through provision of adequate sanitation systems to manage and dispose of human waste, solid waste management, systems for disposal and recycling, and handwashing facilities.

- Attention to: Presence of septic tank. Type of septic tank. Septic tank depth and distance from living spaces. Presence of latrines, quality of latrines, and ratio of latrines for boys and girls. Presence and characteristics of garbage disposal system.

Other exposure: assessment for other sources of pathogen exposure including mosquito/insect borne pathogens, foodborne pathogens, sexually transmitted infections, and any other types of exposure highly present in the community

Pathogen Exposure Reduction Template

Source and location of exposure	# of people exposed	Interventions	# of people no longer exposed	Maintenance necessity/frequency

*Adapted from UNICEF Towards Better Programing, A Manual on School Sanitation and Hygiene

PART 2: INFECTION PREVENTION EDUCATION AND PROMOTION (HYGIENE)

Children's Infection Prevention Education Curriculum Topics

Key points of education curriculum: Actual behavior, knowledge, and attitudes form the basis of the hygiene education program. Participatory methods are used. Hygiene education is based on living conditions and daily behavior.

Goal: students will comprehend concepts related to health promotion and disease prevention

Pre-K-Grade 2 – by grade 2 students will be able to:

- Identify proper steps for daily brushing and flossing teeth (1)
- State why hygiene is important to good health (1)
- Identify the benefits of personal hygiene practices such as washing hair and bathing regularly (1)
- State the steps for proper hand washing (1)
- Describe what it means to be healthy (2)
- Identify different ways that disease-causing germs are transmitted (2)
- Identify ways to prevent the spread of germs that cause common infectious diseases (2)
- Explain that foods and water can contain germs that can cause illness (3)
- Identify food and water safety strategies that can control germs that cause foodborne/waterborne illness (3)
- Identify proper steps for treating a wound to reduce chances of infection (2)

Grades 3-5 – by grade 5 students will be able to:

- Describe the benefits of personal health care practices such as tooth brushing and flossing, washing hair and bathing regularly (1)
- Explain the difference between infectious diseases and non-infectious diseases (2)
- Describe ways that common infectious diseases are transmitted (2)
- Describe symptoms that occur when a person is sick (2)
- Explain how hand washing and covering a cough and sneeze are effective ways to prevent many infectious diseases (1)
- Describe how foodborne and waterborne illnesses can spread at school or in the community (3)
- Describe how to keep food and water safe from harmful germs (3)
- Describe the importance of seeking help and treatment for common infectious diseases (2)

Grades 6-8 – by grade 8 students will be able to:

- Summarize the benefits of good hygiene practices for promoting health and maintaining positive social relationships (1)
- Explain the difference between infectious, noninfectious, acute and chronic diseases (2)

- Summarize the symptoms of someone who is sick or getting sick (2)
- Summarize the ways that common infectious diseases are transmitted (1)
- Summarize health practices to prevent the spread of infectious diseases that are transmitted by food, water, air, indirect contact, and person-person contact (1)
- Describe food and water safety strategies that can control germs that cause foodborne and waterborne illness (3)
- Explain ways to prevent the spread of germs that cause infectious diseases such as HIV by safe sex, not touching blood and by not touching used hypodermic or tattoo needles (1)
- Describe the importance of seeking help and treatment for common infectious diseases (2)

Grades 9-12 – by grade 12 students will be able to:

- Summarize how common infectious diseases are transmitted by indirect contact and person-person contact (2)
- Analyze how common foodborne and waterborne diseases are transmitted (3)
- Explain the relationship between IV drug use and transmission of bloodborne diseases such as HIV and hepatitis (2)
- Summarize ways to prevent the spread of germs that cause infectious diseases such as HIV by safe sex, not touching blood, and not touching used hypodermic or tattoo needles (2)
- Justify why it is important to seek help and treatment for common infectious diseases (1)
- Summarize important health screenings, immunizations, checkups, and examinations, necessary to maintain good health (1)

*Adapted from HECAT Personal Health and Wellness (PHW) Curriculum (2012) p. 1-7

Caregiver/Staff Health Education Topics

Caregivers/staff will be able to:

- Understand that disease can spread rapidly in crowded areas
- Understand signs/symptoms of infectious diseases and how they can harm children
- Explain immediate interventions and treatments for infectious diseases
- Explain benefits of health practices that prevent the spread of infectious diseases
 - o Hand washing
 - o Immunizations
 - o Disposal of waste (human and solid)
 - o Food preparation
 - o Safe drinking water
 - o Separating the ill from others
- Understand ways to encourage health practices that prevent the spread of infectious diseases among children

*Adapted from Facts for Life (2010) – Chapters 6,7,8,9

See children and caregiver curriculum documents (curriculum and resources) for complete curriculum guide

Hygiene Promotion

Hygiene promotion: widespread adoption of safe hygiene practices

Step 1. Initiate Action:

- Define the target area
- Arrange funding
- Set up team
- Hold a planning workshop
- Collaborate with community/communities

Step 2. Make a detailed quality improvement plan:

Objective 1: Identify risk practices (**behavior change objectives**). *Questions:* Which specific practices are allowing infectious pathogens to be transmitted to children? *Methods:* epidemiological knowledge, environmental walk, checklist observation.

Objective 2: select practices for intervention (**key hygiene practices that replace the risk practices**). *Questions:* which risk practices are most widespread? Which risk practices can be altered? *Methods:* structured observation, behavior trials, focus group discussions.

Objective 3: determine message positioning (**motivation for behavior change**). *Questions:* what motivates those who currently use “safe” practices? What are the perceived advantages of the “safe” practices? *Methods:* focus group discussions, interviews with “safe practicers,” behavior trials.

Objective 4: define the target audiences (**age, sex, number in each group**). *Questions:* who and how many use the risk practices? Who influences the primary audience? *Methods:* structured observation, focus group discussion.

Objective 5: select communication channels (**school, house visits**) and communication materials (**the supports you develop for communication activities ex: flash cards, posters**). *Questions:* What channels are currently used for communication? What channels are trusted for important messages? *Methods:* interview representative sample of target audience, focus group discussion.

Method Descriptions:

Environmental Walk: walk around and observe the environment of the community (best time is at dawn/dusk when many hygiene activities are done) – look for water sources and places where garbage is thrown, chat with caregivers about how they keep living spaces and children clean, ask about sewage/water problems, ask about who helps children use the bathroom

Checklist Observation: make a list of all the behaviors that might be putting children at risk for infections, observe for these behaviors and each time one occurs note when and where it happened and who did what

- Possible risk behaviors: not covering water containers, unfiltered drinking water, poor water testing procedures, uncovered food, not cleaning fruits/vegetables, improper cooking of food, food left out in hot/humid environments, improper hand hygiene – procedure or handwashing occasions (before/during/after preparing food; before eating food; before and after caring for someone who is sick; before/after treating a cut or wound; after using toilet, after changing diapers or cleaning up a child using a toilet; after blowing nose/coughing/sneezing; after touching an animal/animal feed/animal waste; after handling pet food/treats; after touching garbage), poor bathroom cleaning, poor personal hygiene (cut fingernails, wash and comb hair, clean clothes), improper garbage disposal

Structured Observation: following checklist observation, perform formal observation of primary risk behaviors and determine the most common occurrences. Choose the most common risky behaviors to focus interventions on.

Behavior Trials: work with members of the community (children, caregivers, staff) to design and practice replacement behaviors for risky behaviors. Determine what they like and dislike about the new behaviors. Encourage new behaviors and follow up with members of the trial group for several weeks to support him/her and help address any barriers. Following the trial, summarize the exact sequence of events that go into the replacement practices, the problems encountered, the solutions found by participants, and the advantages that participants thought they got from the new behavior. Connect successful replacement behaviors to health promotion program.

Focus Group Discussions: gather a group of people with similar backgrounds (children of same age group, caregivers of same age children, clinic staff, etc.) and assess why people do or think what they do – decide objectives of the group, create a discussion guide, and make people feel comfortable. Place people in a circle, have refreshments, and make people feel at ease. The discussion should last about an hour. Record, take notes, and transcribe data from group.

Structured Interviews: interview individuals who are already using target practices. Ask about why they adopted safe practices and what they see as the advantages to using the target practices. Note the most common motivations for safe practices among interviewees.

***not all methods need to be used – select methods that are most appropriate to the environment and useful for the assessment**

Steps 3 and 4: Carry out field assessment and analyze results:

Assessment questions	Methods used	Key findings	Key findings for intervention
What are the risk practices?	Environmental walk, checklist observation, structured observation		Risk practices:
What are the target practices?	Behavior trials, structured interviews		Target practices:
Who are the target groups?	Observation, focus group discussions		Target groups:
What motivates behavior change?	Focus groups, structured interview		Motivation:
How do people communicate?	Interviews, focus groups		Communication channels:

Step 5: Make the communication plan

- Behavior change objectives (measurable goals for behavior change)
- Target practices (primary hygiene practices to replace risk practices)
- Target audience (age, sex, number in each group)
- Positioning (motivation for behavior change)
- Channels of communication (schools, home visits, clinic visit, etc.)
- Communication materials (supports you develop for your communications activities)
- Monitoring (methods for following progress in program activities, indicators, program outputs, and behavior change)

Motivational Messages and Message Positioning: use collected data to determine the motivational messages to be used for the health promotion communication (ex: feeling of cleanliness, smell of clean hands, cleaner children, happier kids, etc.). Create a positioning statement that picks out a key advantage and a key goal for each target practice (ex: I want to wash my hands with soap and water after contact with stools because it leaves my hands smelling nice and I feel clean). Communicate positive messages through a variety of mechanisms based on how the community communicates (ex: posters, staff meetings, schools, home visits, special events, newspapers, etc.)

- Communication materials should: **be attractive** (to pull people in), **use local idiom and situations** (so people feel it concerns them), **be repetitive** (so messages are retained), **be easy to understand** (so nobody gets confused), **be participatory** (exchange of views is most effective), **be provocative** (so they are memorable and discussed), and **show by example** (so new practices are seen to be possible) (Hiam, Kotler, Graeff)

*Adapted from UNICEF Towards Better Programing, A Manual on Hygiene Promotion

Risky Behaviors Monitoring Template

Risky Behavior	Frequency of observed occurrence (group of people – ex: age, gender, neighborhood, etc.)	Frequency of bserved occurrence (group of people – ex: age, gender, neighborhood, etc.)	Frequency of observed occurrence (group of people – ex: age, gender, neighborhood, etc.)	Frequency of observed occurrence (group of people – ex: age, gender, neighborhood, etc.)
Risky behavior 1 (Ex: improper hand hygiene)	Low, Medium, or High	Low, Medium, or High	Low, Medium, or High	Low, Medium, or High
Risky behavior 2	Low, Medium, or High	Low, Medium, or High	Low, Medium, or High	Low, Medium, or High

PART 3: INFECTION SURVEILLANCE AND EVALUATION

Components of surveillance and response systems:

1. Priority diseases for surveillance: key infectious diseases affecting the population
2. Surveillance system structure: policy, surveillance strategy, surveillance implementers and stakeholders
3. Core functions: case detection, case registration, case confirmation, reporting, data analysis and interpretation, epidemic preparedness, response and control, feedback
4. Support functions: standards and guidelines, training, supervision, communication methods, resources, coordination
5. Surveillance quality: completeness, timeliness, usefulness, simplicity, acceptability, flexibility, sensitivity, specificity, positive predictive value, representativeness

Strategic planning workshop goals:

1. Define the vision, mission statement, goals, and strategy for surveillance and response program implementation
 2. Define expected key result areas/general objectives (ex: occurrence of communicable disease in a child will be noted in designed surveillance system every time)
 3. Identify activities/interventions for each objective
 4. Define the roles and responsibilities of the staff and stakeholders of the surveillance and response system
 5. Implement the designed surveillance and response system
- Follow up: Summarize the major problems affecting communicable disease surveillance and response systems to be modified.

*Adapted from WHO Communicable disease surveillance and response systems, A guide to planning

Community Infection Surveillance Monthly Tracking Document

Month: _____

Body System:	Number of Cases:
General - Illnesses present (circle): myalgia, general malaise, body aches, other:	
Neurological - Illnesses present (circle): meningitis, encephalitis, other:	
Ears, eyes, nose, throat - Illnesses present (circle): tonsillitis, conjunctivitis, otitis externa/media/interna, mastoiditis, rhinosinusitis, epiglottitis, mumps, measles, varicella, rubella, Epstein-Barr virus, other:	
Integumentary (hair, skin, nails) - Illnesses present (circle): cellulitis, skin abscess, scabies, MRSA, dermatitis, impetigo, other:	
Respiratory - Illnesses present (circle): bronchiolitis, bronchitis, pneumonia, respiratory syncytial virus, croup, tuberculosis, influenza, other:	
Cardiovascular and peripheral vascular: myocarditis, endocarditis, Kawasaki disease, other:	
Gastrointestinal - Illnesses present (circle): gastroenteritis (N/V/D), parasitic infections, hepatitis A, botulism, other:	
Genitourinary - Illnesses present (circle): sexually transmitted disease, urinary tract infection, nephritis, acute urethral syndrome, other:	
Skeletal/muscular - Illnesses present (circle): osteomyelitis, bacterial arthritis, other:	
Insect-born - Illnesses present (circle): dengue, chikungunya, zika, lyme disease, malaria, other:	

Notes:

Resources

- Centers for Disease Control and Prevention. *Health Education Curriculum Analysis Tool, 2012*, Atlanta: CDC; 2012
- UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP and the World Bank. (2010). *Facts for life* (4th ed.). New York, NY: UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP and the World Bank.
- United Nations Children's Fund. (1998). *A Manual on School Sanitation and Hygiene* (Water, Environment and Sanitation Technical Guidelines Series - No. 5). New York, NY: UNICEF.
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- World Health Organization. (2006). *Communicable disease surveillance and response systems. A guide to planning*. Geneva: WHO.