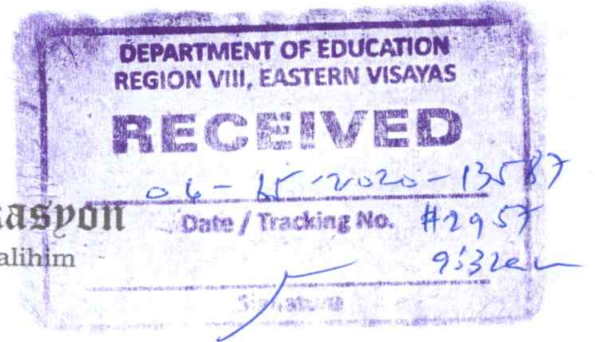




Republika ng Pilipinas
Kagawaran ng Edukasyon
Tanggapan ng Pangalawang Kalihim



OUA MEMO 08-0620-0715
MEMORANDUM
04 June 2020

For: Regional Directors
BARMM Minister for Basic, Higher, and Technical Education
Schools Division Superintendents
School Heads

Subject: PREVENTING WATER-BORNE DISEASES AND OTHER
HEALTH DISEASES DURING RAINY SEASON

The onset of rainy season, typhoons and heavy rains may cause flooding, which in turn can potentially increase the transmission of water-borne diseases or diseases transmitted through water contaminated with human or animal waste. These include typhoid fever, cholera, leptospirosis, and hepatitis A. Likewise, other diseases such as dengue fever and influenza are also common during rainy season.

This Memorandum is issued in order to provide health advisories from the Department of Health (DOH) Philippine Health Advisories. See enclosed for reference of teachers, non-teaching personnel and learners that contains basic information about each disease such as transmission, signs and symptoms, and most importantly, how it can be prevented.

Regional Directors, Schools Division Superintendents and School Heads are enjoined to provide an avenue for immediate dissemination of this Memorandum.

For your guidance and compliance.


ALAIN DEL B. PASCUA
Undersecretary

Office of the Undersecretary for Administration (OUA)

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Dengue

Dengue fever and dengue hemorrhagic fever are acute viral infections that affect infants, young children, and adults.

Cause

Bite of an *Aedes aegypti* mosquito infected with any one of the four dengue viruses

Mode of Transmission

Transmitted by a day-biting mosquito called *Aedes aegypti* and *Aedes albopictus* (These mosquitoes lay eggs in clear and stagnant water found in flower vases, cans, rain barrels, old rubber tires, etc. The adult mosquitoes rest in dark places of the house.)

Signs and Symptoms

- Sudden onset of high fever which may last from 2 to 7 days.
- Joint and muscle pain and pain behind the eyes
- Weakness
- Skin rashes
- Nosebleeding when fever starts to subside
- Abdominal pain
- Vomiting of coffee-colored matter
- Dark-colored stools
- Difficulty of breathing

Treatment

- Do not give aspirin for fever.
- Give sufficient amount of water or rehydrate a dengue suspect.

- If fever or symptoms persist for 2 or more days, bring the patient to the nearest hospital.

Prevention and Control

Follow the 4-S against Dengue:

1. Search and Destroy

- Cover water drums and pails.
- Replace water in flower vases once a week.



- Clean gutters of leaves and debris.
- Collect and dispose all unusable tin cans, jars, bottles and other items that can collect and hold water.

2. Self-Protection Measures

- Wear long pants and long sleeved shirt.
- Use mosquito repellent every day.

3. Seek Early Consultation

Consult the doctors immediately if fever persists after 2 days and rashes appears.

4. Say Yes to Fogging When There is an Impending Outbreak or a Hotspot

References

- DOH Philippines. (2005). Health Advisory on Dengue.
- World Health Organization. (2011) Dengue haemorrhagic fever. Retrieved from <http://www.who.int/csr/disease/dengue/en>.

Image from <http://www.dilg.gov.ph/news.php?id=32&newsCategory=Central>



Influenza

Influenza, commonly called the flu, is a viral infection that attacks the respiratory system. This type of flu is not the same as the stomach “flu” virus that causes diarrhea and vomiting. Young children, older adults, pregnant women, and people who have weakened immune system are highly susceptible to flu. Incubation period is 1-3 days.

Cause

- Influenza virus (A, B, or C)

Mode of Transmission

- Entry of the Influenza virus (A, B, or C) into the respiratory tract when someone coughs or sneezes
- Contact with the surfaces, material, and clothing contaminated with discharges of an infected person

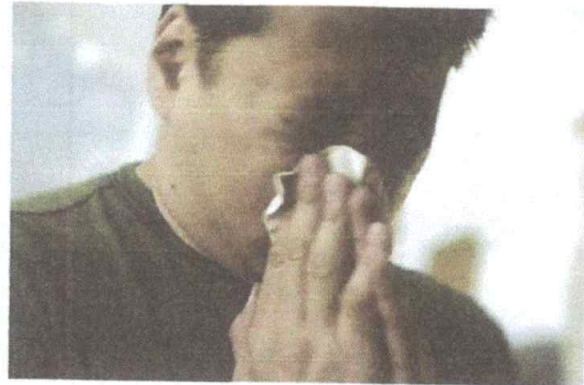
Signs and Symptoms

- Fever of at least 38°C
- Headache
- Runny nose, sore throat, cough, or other respiratory manifestations
- May or may not have muscle or joint pains

Treatment

- Use of antiviral agents, such as oseltamivir (Tamiflu) or zanamivir (Relenza), within the first 2 days may shorten the illness and help prevent serious complications.
- Have adequate rest.
- Increase intake of oral fluids and nutritious foods.

- Take paracetamol for fever. Aspirin should not be given to children.
- Antibiotics should be given only to complications of influenza, such as pneumonia or otitis media.



Prevention

- Give influenza vaccination preferably annually.
- Minimize contact with a person who has influenza.
- Avoid crowded places.
- Distance yourself by at least 1 meter from people who are coughing or have influenza.
- Cover mouth and nose when sneezing or coughing to prevent spread of the virus.
- Wash hands frequently with soap and water.

References

- DOH Philippines. (2005). Health Advisory on Influenza.
- World Health Organization. (2011). Influenza. Retrieved from <http://www.who.int/topics/influenza/en>

Image from http://article.wn.com/view/2011/12/30/Potent_strain_of_influenza_gains_a_foothold_in_BC/



Leptospirosis

Leptospirosis is a bacterial infection transmitted by many animals, such as rodents and other vermin. Waste products (e.g., urine and feces) of an infected animal, especially rats, contaminate the soil, water, and vegetation.

Cause

Leptospira spirochetes bacteria

Mode of Transmission

Ingesting contaminated food or water or when broken skin or open wounds and mucous membrane (eyes, nose, sinuses, mouth) come in contact with contaminated water (usually flood water) or soil (Incubation period of bacteria is 7-10 days.)



Signs and Symptoms

- Fever
- Non-specific symptoms of muscle pain, headache
- Calf-muscle pain and reddish eyes in some cases

- Severe cases resulting in liver involvement, kidney failure, or brain involvement (Thus some cases may have yellowish body discoloration, dark-colored urine and light stools, low urine output, severe headache.)

Treatment

- Take antibiotics duly prescribed by a physician.
- Early recognition and treatment within 2 days of illness prevents complications of leptospirosis, so early consultation is advised.

Prevention and Control

- Avoid swimming or wading in potentially contaminated water or flood water.
- Use proper protection, like boots and gloves, when work requires exposure to contaminated water.
- Drain potentially contaminated water when possible.
- Control rodents in the household by using rat traps or rat poison and maintaining cleanliness in the house.

References

- Centers for Disease Control and Prevention. (2011). Leptospirosis. Retrieved from <http://www.cdc.gov/>
- Cunha, John P. (2011). Leptospirosis. Retrieved from <http://www.medicinenet.com/leptospirosis/article.htm>
- DOH Philippines. (2012). Health Advisory on Leptospirosis.

Image from <http://www.tribuneonline.org/metro/20091025/met2.html>



Typhoid Fever

Typhoid fever is an infectious disease which is also known as enteric fever or just typhoid.

Cause

Salmonella typhi bacteria

Mode of Transmission

Spreads through contaminated food and water or through close contact with someone who is infected

Signs and Symptoms

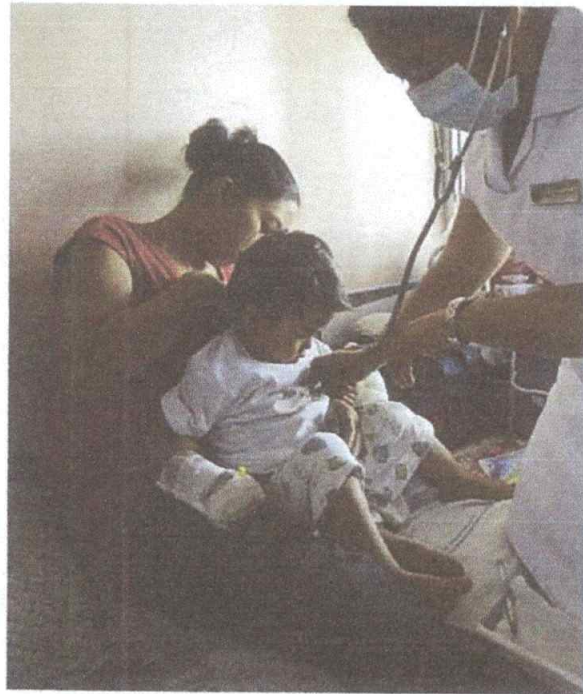
- Sustained high fever
- Headache
- Malaise (weakness)
- Anorexia (loss of appetite)
- Either diarrhea or constipation
- Abdominal discomfort

Treatment

Antibiotics, such as ciprofloxacin, may be given to adults. Ceftriaxone (injectable antibiotic) may be given to pregnant women and children.

Prevention and Control

- Avoid drinking untreated water. Boil water for drinking (upon reaching boiling point, extend boiling for 2 or more minutes) or do water chlorination.
- Cook food well and always cover food to prevent contamination from flies and other insects.
- Avoid eating unsanitary street-vended foods.



- Wash hands with soap and water after using the toilet and before eating.
- Keep surroundings clean to prevent breeding of flies.
- Get immunized with WHO pre-qualified oral injectable vaccines.

References

- Balentine, Jerry R. (2011) Typhoid Fever. Retrieved from http://www.medicinenet.com/typhoid_fever/article.htm
- Centers for Disease Control and Prevention. (2011). Typhoid Fever. Retrieved from http://www.cdc.gov/nczved/.../typhoid_fever/
- DOH Philippines. (2005). Health Advisory on Typhoid Fever.

Image from http://www.allvoices.com/people/Vital_signs



Cholera

Cholera is an acute intestinal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. It has a short incubation period, from less than 1 day to 5 days. The bacterium produces an enterotoxin that causes a copious, painless, watery diarrhea that can quickly lead to severe dehydration and death if treatment is not promptly given. In extreme cases, cholera is a rapidly fatal disease. A healthy individual may die within 2-3 hours if no treatment is provided.

Cause

Vibrio cholerae bacteria

Mode of Transmission

Eating food or drinking water contaminated with human waste infected with *Vibrio cholerae* bacteria

Signs and Symptoms

- Sudden onset of frequent painless watery stools
- Vomiting
- Rapid dehydration (e.g., sunken eyeballs, wrinkled and dry skin)

Treatment

- Replace lost body fluid by giving Oral Rehydration Solution (ORESOL) or a homemade solution composed of 1 teaspoon of salt, 4 teaspoons of sugar mixed in 1 liter of water.
- If diarrhea persists, consult health

workers or bring the patient to the nearest hospital.

Prevention and Control

- Drink only safe and clean water. If unsure, boil drinking water (Upon reaching boiling point, extend boiling for 3 or more minutes). Or do water chlorination.
- Keep food away from insects and rats by covering it.
- Wash and cook food properly.
- Dispose of human waste properly.
- Use toilet properly and clean toilet every day. Wash hands with soap and water after using toilet and before eating.
- Keep surroundings clean to prevent flies and other insects and rodents from breeding.
- A WHO pre-qualified oral cholera vaccine is available for travelers and people in endemic areas. It is given in two doses and offers protection for 3 years.



References

- Centers for Diseases Control and Prevention. (2011) Cholera. Retrieved from <http://www.cdc.gov/cholera>
- DOH Philippines. (2005). Health Advisory on Cholera.
- World Health Organization. (2011) Cholera. Retrieved from <http://www.who.int/topics/cholera/en>

Image from <http://talakayanatkalusugan.com/2011/04/15/cholera-outbreak-declared-in-philippine-island/>



Hepatitis A

Hepatitis A, one of the oldest diseases known to humankind, is a very infectious viral disease.

Cause

Hepatitis A virus (HAV)

Mode of Transmission

Ingestion of food contaminated with human waste and urine of persons who have Hepatitis A

Signs and Symptoms

- Fever
- Flu-like symptoms: weakness, muscle and joint aches, loss of appetite, dizziness
- With or without vomiting
- Tiredness or fatigue
- Abdominal discomfort (pain in the liver area)
- Dark/brownish urine
- Jaundice

Symptoms may be so mild that they go unnoticed.



Symptoms usually develop between 2 and 6 weeks after infection.

Treatment

- There is no specific medicine to cure the patient or shorten the course of illness.
- Sick persons should be isolated, advised to rest, take plenty of fluids, and avoid fatty foods.
- Patients who fail to take fluids or are too weak to eat are sometimes brought to hospital for intravenous administration of fluids and vitamins.

Prevention and Control

- Wash hands after using the toilet, before preparing food, and before eating.
- Dispose human waste properly.
- Thoroughly cook oysters, clams, and other shellfish for 4 minutes or steam for 1 minute and 30 seconds.
- Practice safe handling and storage of food and water.
- Get Hepatitis A vaccine.

References

- DOH Philippines. (2005). Health Advisory on Hepatitis A.
- World Health Organization. (2011). Hepatitis. Retrieved from <http://www.who.int/topics/hepatitis/en>

Image from <http://www.gihealth.com/html/education/hepatitisA.html>