

PROPER SANITATION IS THE ONLY METHOD TO SUCCESSFULLY BEAT A CHOLERA OR SHIGELLOSIS OUTBREAK!

What to use for disinfection*:

Chlorine product	Hands and skin	Floors, clothes, bedding, equipment.	Body fluids** (Rice Water stool, Diarrhea, Vomit treated in large containers)
	Final concentration: 0.05% active chlorine	Final concentration: 0.5% active chlorine	Final concentration: 2% active chlorine. Wait at least 2 hours before dumping.
Household bleach (5% active)	0.1 liters of bleach to 9.9 liters of water (WRITE: 0.05%)	1 liter of bleach mixed with 10 liters of water (WRITE: 0.5%)	4 liters of bleach mixed with 6 liters of water (WRITE: 2%)
Household bleach (30% active chlorine)	Add 16 grams or 1 tablespoon to 10 liters of water (WRITE: 0.05%)	16 grams or 1 tablespoon to 1 liter of water (WRITE: 0.5%)	64 grams or 4 tablespoons to 1 liter of water (WRITE: 2%)
Calcium hypochlorite powder or chlorine granules (70% active chlorine)	7 grams or ½ a tablespoon to 10 liters of water (WRITE: 0.05%)	7 grams or ½ a tablespoon to 1 liter of water (WRITE: 0.5%)	28 grams or 2 tablespoons to 1 liter of water (WRITE: 2%)

* ALWAYS label the solutions with a permanent marker.

** Note that if chlorine is limited, body fluids can be treated with a final concentration of 0.5% chlorine, but the fluids must be held and occasionally stirred for at least 6 HOURS before dumping.

Education of Patient Caretaker (Family Member):

Inform the Patient Caretaker of their duties in terms of how the patient waste should be handled, where the bathrooms or latrines are located, where hand washing stations are located, and what food items (including at what time) the family is expected to provide and what food items the treatment center will provide.



**COTS Program
Epidemiologist
Pocket Card**

WHO messages to avoid diarrhea:

- Wash your hands with soap:
 - After using toilets/latrines
 - After disposing of children’s feces
 - Before preparing food
 - Before eating
 - Before feeding children
- Boil or disinfect water with chlorine solution
- Only eat freshly cooked food
- Do not defecate near water sources
- Use latrines and keep them clean
- Peel it, cook it, or leave it

**Food and Water Hospital Policies
(in addition to WHO messages above):**

- ORS should not be stored for more than 6 hours.
- Health care workers should **NOT** handle food or water
- The kitchen should be **SEPERATE** from the hospital; kitchen staff should not handle hospital waste
- Dispose of all unused cooked food if there is no refrigeration (below 10°C)
- All food should be cooked thoroughly to at least 70°C
- Keep raw and cooked foods separately
- A treatment center must have 40-60 liters of clean water per patient per day
- Rice-water stool (diarrheal fluids) and vomitus fluids should be disposed of by the sanitation team

WHO definition for suspected cholera:

- A person older than 5 years with severe dehydration from acute watery diarrhea (usually with vomiting).
- Any person older than 2 years with acute watery diarrhea where there is an outbreak of cholera.
- In addition, any sudden increase in the daily number of patients with acute watery diarrhea, especially patients who pass typical rice-water stools.

WHO definition for suspected shigellosis:

- Diarrhea with visible blood in the stool.

Laboratory rules of thumb:

- Collect a random diarrheal sample by collecting from every 10th diarrheal patient. This should be adjusted according to the size of the outbreak so that the required 10-20 samples are collected. If you find that you are having less than 100 patients a month, then collect more frequently (i.e. every 5th patient).
- Get 10-20 diarrheal samples (1 sample from each patient) for laboratory confirmation at the beginning of the outbreak.
- Get 10-20 diarrheal samples at least every month to tract the causative organism/ strain and the antimicrobial sensitivity.
- Collect about 20 diarrheal samples at the end of the outbreak to confirm that the outbreak is over. Even in an endemic area, cholera or shigellosis should cause less than 5% of all acute diarrhea cases when an epidemic is not presently occurring.

Reporting outline:

Begin by describing how the outbreak was suspected: whether it started from a cluster of cases, a single case, or an incidence greater than the same period in previous years. Use the clinical case definition to collect data from treatment centers about the patients. If possible, obtain data from community health volunteers about patients not coming to the hospital.

It is useful to use a standardized admission information sheet like the one suggested by the WHO. Compile these data and describe the outbreak in terms of:

- Attack rate (cases/1000 population)
- Geographical extent
- Case fatality rate (CFR), including age and gender CFR distribution
- Gender distribution of cases
- Age distribution of cases (separate into two groups: under 5 years and 5 years and above)
- Speculate about the probable evolution of the outbreak (i.e. how many people might be affected, which stations might be affected, how this might influence the economy, health systems, and migration of people)
- Discuss special considerations for this particular outbreak
- Cultural issues
- Social structure
- Political situation
- Security
- Vulnerable populations
- Coping ability of the population

Classify the number of cases and number of deaths in at least two age groups; under 5 years and 5 years and older for reporting to the WHO

Don't forget the following possible 'at risk' groups:

- Patients with poor access to health services
- The extreme poor
- Racial/ethnic/religious minorities
- Malnourished patients
- Pregnant and lactating women
- Children not vaccinated against measles
- Elderly patients
- Non-breastfed infants