

Note: This document has two sections:

A. For CHWs and

B. For families and households.

A. What Items *CHW teams* should stock in advance of an outbreak

In low-resource settings, community health workers (CHWs) are often the first—and sometimes only—line of defense during an outbreak. Because specialized medical equipment is rarely available, preparation relies on "dual-purpose" items that work for everything from respiratory viruses (like COVID-19 or TB) to water-borne diseases (like cholera) or viral hemorrhages (like Ebola).

Here are 10 essential items and preparations for CHW outbreak readiness:

1. Multi-tiered Personal Protective Equipment (PPE)

Standardizing a "starter pack" of PPE ensures the CHW doesn't become a vector for the disease.

- **Disposable Gloves:** Essential for all patient contact.
- **Surgical Masks & N95s:** For protection against respiratory droplets and aerosols.
- **Face Shields or Goggles:** Crucial for preventing splashes to the eyes.
- **Reusable Gowns or Aprons:** To protect clothing, which can be disinfected and reused if disposables run out.

2. Hand Hygiene Station (The "Tippy-tap")

In areas without piped water, CHWs must have a mobile or fixed handwashing solution.

- **Soap and Alcohol-based Hand Rub:** At least 60% alcohol content.
- **Tippy-Tap Materials:** A simple plastic jug, string, and sticks to create a foot-pedal operated washing station that prevents recontamination of the hands.

3. Contactless Infrared Thermometer

Fever is a hallmark symptom of many outbreaks (malaria, Ebola, COVID-19, meningitis). A contactless thermometer allows for "triage from a distance," letting the CHW screen community members without direct physical contact until the risk is assessed.

4. Oral Rehydration Salts (ORS) and Zinc

Dehydration is a leading cause of death in many outbreaks, particularly those involving diarrhea (cholera) or high fevers.

- **The Preparation:** CHWs should have pre-measured sachets and a **standardized 1-liter vessel** to ensure the salt-to-water ratio is accurate, as incorrect mixing can be dangerous for children. ***Note that WIRED offers a module on Oral Rehydration Therapy in this ACT series.***

5. Household Water Treatment Supplies

During an outbreak, the primary water source is often the first thing compromised.

- **Chlorine Tablets (Aquatabs) or Bleach:** For water purification.
- **Storage Containers:** Narrow-necked "safe water" jerrycans that prevent hands or cups from dipping into and contaminating the clean water.

6. Standardized Patient Logbook and "Line List"

Data is a physical necessity. CHWs need a dedicated, waterproof logbook to track:

- Symptoms, onset dates, and geographic locations of cases.
- This physical record allows health authorities to "map" the outbreak and identify the source (e.g., a specific well or a specific social gathering).

7. Biohazard Waste Containers

Improper disposal of used needles, bandages, or masks can trigger a secondary outbreak.

- **Puncture-proof "Sharps" boxes:** For needles or lancets.
- **Color-coded heavy-duty bags:** To separate infectious waste from standard community trash.

8. Laminated Visual Communication Cards

In an outbreak, panic and misinformation spread faster than the disease.

- **Physical Tool:** Durable, laminated cards with simple illustrations (rather than heavy text) showing how to spot symptoms, how to wash hands, and when to seek hospital care. These survive the "field" better than paper brochures.

9. Rapid Diagnostic Tests (RDTs) for Endemic Diseases

To "rule out" common illnesses, CHWs should have RDTs for diseases like **malaria**. In many regions, a child with a fever is often assumed to have Malaria; having a physical test helps the CHW determine if the fever is actually a sign of a new, emerging outbreak.

10. Portable Power (Solar Power Bank)

Modern CHWs often use mobile phones for reporting data or calling for ambulances.

- **The Item:** A rugged, solar-powered battery bank ensures that even if the local power grid fails or the CHW is in a remote area, they remain the vital communication link between the village and the district health office.

Outbreak Readiness Checklist for CHWs

Goal: To help CHWs prepare for health emergencies in low-resource settings.

- ❑ **Multi-tiered PPE:** Disposable gloves, surgical/N95 masks, face shields or goggles, and reusable gowns.
- ❑ **Hand Hygiene Station:** Soap, 60% alcohol hand rub, and materials for a foot-operated "Tippy-tap".
- ❑ **Contactless Infrared Thermometer:** To screen for fever (a hallmark of malaria, Ebola, and COVID-19) from a safe distance.
- ❑ **Medical Treatment Supplies:** Pre-measured Oral Rehydration Salt (ORS) sachets, zinc, and a standardized 1-liter vessel.
- ❑ **Water Treatment:** Chlorine tablets (Aquatabs) or bleach and narrow-necked jerrycans to prevent contamination.
- ❑ **Data Tools:** A waterproof logbook and "Line List" to track symptoms and map case locations.
- ❑ **Waste Disposal:** Puncture-proof "sharps" boxes for needles and color-coded bags for infectious waste.
- ❑ **Visual Communication:** Laminated cards with simple illustrations showing symptom spotting and handwashing.
- ❑ **Diagnostic Kits:** Rapid Diagnostic Tests (RDTs) for endemic diseases like Malaria to rule out emerging outbreaks.
- ❑ **Portable Power:** A rugged solar power bank to keep mobile phones charged for data reporting and calling ambulances.

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B. What Items *households* should stock in advance of an outbreak

When an outbreak hits, a household's goal is to become a "mini-isolation ward" and a self-sufficient unit. Since supply chains often break down during health emergencies, CHWs should encourage families to stockpile these items **before** the first case appears in town. Here are 10 items community members should have ready at the household level:

1. The "Sick Corner" Kit

If a family member falls ill, they need to be physically separated.

- **A dedicated bucket and basin:** Specifically for the sick person's laundry and sponge baths.
- **A separate set of utensils:** One plate, one cup, and one spoon that only the sick person uses, kept away from the rest of the family's dishes.

2. Homemade Rehydration Supplies

Since ORS sachets might run out at the local clinic, every household should know the "Rule of Thumb" for a DIY rehydration drink.

- **The Supplies:** A clean 1-liter bottle, a bag of **sugar**, and a bag of **salt**.
- **The Formula:** 6 level teaspoons of sugar and 1/2 level teaspoon of salt dissolved in 1 liter of clean water. **Be as accurate as possible with these proportions!**

3. High-energy, Shelf-stable Foods

In an outbreak, families may be quarantined and unable to go to the market or work their fields.

- **Items:** Grains (rice, maize, millet), dried beans or lentils, and cooking oil.
- **Goal:** A 14-day supply of calorie-dense foods that don't require refrigeration.

4. Household Disinfectant (Bleach)

Plain, unscented laundry bleach is a powerhouse for killing viruses and bacteria on surfaces.

- **Storage:** A tightly sealed bottle kept in a dark place (sunlight weakens bleach).
- **Usage:** CHWs can teach families how to dilute it for two different purposes: a "strong" solution for cleaning vomit/feces and a "mild" solution for wiping down door handles and tables.

5. Dedicated "Caregiver" Clothing

To prevent the disease from spreading to the whole family, one person should be designated the "Caregiver."

- **The Gear:** A specific long-sleeved shirt, trousers, and a head covering (like a scarf) that the caregiver puts on *only* when entering the sick person's area and removes immediately after, leaving it in a bucket to be disinfected.

6. Lidded Waste Bin

Open trash attracts flies and pests that can spread pathogens from used tissues or contaminated materials to food.

- **The Item:** A simple bucket with a tight-fitting lid or even a heavy-duty sack that can be tied shut.

7. A "Water Reserve"

Outbreaks often lead to labor shortages that prevent water from being pumped or delivered.

- **The Item:** At least two large, covered jerrycans or drums (20L+) dedicated strictly to emergency storage, treated with chlorine or boiled, and never opened unless the main supply fails.
- **Alternate water strategy:** Clean water is critical. Have on hand chlorine tablets (Aquatabs) or bleach. CHW should teach all community members how to use chlorine to purify water. They also should review water boiling and SODIS (solar purification) techniques. Procedures for each approach are covered in WiRED's modules that can be accessed on HealthMAP.

8. Barrier Protection (Household Style)

If medical masks aren't available, households should have materials to create makeshift barriers.

- **The Items:** Multiple layers of tightly woven cotton cloth (like a *chitenge* or *sarong*) that can be washed and reused, and **rubber household gloves** for cleaning the sick area.

9. Fever Management (Paracetamol/Acetaminophen)

While it doesn't cure the underlying disease, reducing a high fever can prevent febrile seizures (especially in children) and keep a patient comfortable enough to continue drinking fluids.

- **Important Note:** CHWs should instruct families on the exact dosage for children to prevent liver toxicity.

10. A Communication Plan (Physical Contact List)

In many low-resource areas, people rely on word-of-mouth.

- **The Item:** A physical piece of paper kept in the home with the phone number of the CHW, the nearest clinic, and the "Headman" or community leader.

- **Why:** In a crisis, people panic and forget numbers; having it written down ensures the family can call for help or an ambulance the moment symptoms appear.

Outbreak Readiness Checklist for Families and Households

Goal: To turn the home into a self-sufficient "mini-isolation ward."

- **The "Sick Corner" Kit:** A dedicated bucket, basin, and a separate set of utensils (plate, cup, spoon) for the ill person.
- **DIY Rehydration Supplies:** A clean 1-liter bottle, sugar, and salt (Formula: 6 tsp sugar + 1/2 tsp salt per 1 liter water).
- **14-Day Food Supply:** Shelf-stable, calorie-dense grains (rice, maize, millet), dried beans, and cooking oil.
- **Household Disinfectant:** Unscented bleach stored in a dark place, with instructions for "strong" and "mild" dilutions.
- **Caregiver Gear:** Specific long-sleeved clothing and a head covering used only when entering the sick area.
- **Lidded Waste Bin:** A bucket with a tight lid or a heavy-duty sack to keep flies away from contaminated waste.
- **Water Reserve:** At least two 20L+ jerrycans or drums for emergency storage, treated with chlorine or boiled.
- **Barrier Protection:** Layers of tightly woven cotton (like a *chitenge*) for makeshift masks and rubber gloves for cleaning.
- **Fever Management:** Paracetamol or Acetaminophen to reduce high fevers (follow CHW dosage instructions for children).
- **Physical Contact List:** A paper with phone numbers for the CHW, nearest clinic, and community leader.