

# Home Pandemic Preparedness for Medical Personnel: a Checklist

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Pandemics happen at a rate of 3 times per century on average. There is no doubt we will face another pandemic, the only questions regard timing and severity. No one can say at this point whether the next event will be mild (Hong Kong Flu, 1968, 2-3 million fatalities) or catastrophic (Spanish Flu, 1918, 50-100 million fatalities).

Public health experts at the WHO and CDC have expressed grave concern over the possibility that the H5N1 strain, a highly pathogenic influenza virus that has decimated hundreds of millions of birds, could mutate to a form easily transmissible among humans. H5N1 has shown similarities to the 1918 virus in its propensity to cause overwhelming viral pneumonia and ARDS in otherwise healthy adults. Mortality in humans has varied between 30-70%, a remarkably high rate.

Whether the next pandemic is caused by H5N1 or another strain, there are simple steps that can be taken to mitigate pandemic impact. Home preparation is essential to prepare for a potential devastating influenza outbreak as well as other natural and man-made disasters that can occur. By ensuring that our families' needs are met we will be more comfortable leaving our homes to work in the hospital environment.

The purpose of this checklist is to give health care providers a quick reference guide for items to stockpile. In the event of a moderate pandemic, our societies' "just in time" approach to stocking supermarkets and other stores would become highly vulnerable. Consider how quickly stores are emptied when a hurricane or ice storm is approaching. During a pandemic interstate commerce could come to a halt as transportation workers fell ill. Worst case scenarios could include interruptions in supply of power and water as employees fell ill or stayed home to care for ill family members.

The U.S. government currently recommends that every American have a 3-week supply of food, water, and medication at a minimum due to

the threat of a pandemic. As healthcare workers we have special skills that may be of benefit to our families and communities. It is my hope that these items and concepts can be used to help not only your family but also your immediate community to weather the 2-3 waves of a pandemic flu event.

I've divided the list into items everyone should consider obtaining now as well as other, more expensive specialty items that could probably wait until it is apparent that a pandemic is forthcoming. Influenza pandemics are divided into 6 phases by the World Health Organization. Phases 1 and 2 are the "Interpandemic period" when there is no apparent threat from any circulating influenza virus. Phases 3-5 are the "Pandemic Alert Phases", and Phase 6 is defined by occurrence of a pandemic, with worldwide human to human transmission of a virulent influenza strain. We are currently in between Phases 3 and 4.

It is my hope that you will find this list useful, and any suggestions for improvement are most welcome.

### **Preparation during Pandemic Alert Phase 3 to 4** (*where we are now. Small clusters of human infection, very rare human to human spread*)

**Food:** 3 week to 3 month supply recommended

#### Grains

- instant oatmeal
- peanut butter
- crackers
- power bars
- cereal: cheerios, granola
- instant noodles
- rice, pasta, cous cous

"Emergency Ration" food bars [www.quakekare.com](http://www.quakekare.com)

2400 calories (six 400 calorie packets): 3\$ for 1 day supply

Lasts for 5 years, even under extremes of temperature

#### Canned/jarred items

- beans, chili
- tuna, other meats
- fruits, vegetables
- soups
- pasta sauce

At least 2 manual can openers

#### Dehydrated foods

- eggs
- milk
- powdered fruit drink mix
- Mountain House Freeze dried starter pack \$229
- will feed 2 people 3 meals a day for 9 days

useful especially leaving area under short notice  
shelf life of 30 years

#### Miscellaneous

Cooking oil  
Coffee, tea  
Vitamins  
Baby formula, baby food

**Water:** Recommended: 1 gallon/day/adult for 3 weeks to 3 months

#### Options:

Food-grade FDA certified storage barrels with 5 year preserver concentrate  
Bung wrench for removing plugs  
Waterproof tape to mark date filled, siphon pump 5 gallon container with on-off tap to hold water pumped from barrel  
e.g. 55 gallon water barrel and accessories from [www.quakecare.com](http://www.quakecare.com):  
78 dollars  
Aqua-blox 5 year “juice-box” 8 oz boxes of water in 3 packs  
Water purification: Exstream Orinoco or similar product  
Water collection system from rain gutters: see <http://www.saferain.com.au>

### **Supplies: Non-medical**

#### **Active Communication**

Cell phone capable of text messaging  
*wireless data services offered by mobile network operators  
frequently available even when voice calling is degraded, offline,  
or overwhelmed*  
Nextel type cell phones  
6 mile range in “walkie-talkie” mode  
Payphones  
2 rolls of quarters  
Prepaid phone cards from 2 companies  
*Payphones are the most likely to be functional after a disaster  
when compared to cell phones and regular telephone lines  
-have a contact person out of the state if possible*  
HAM radio: see below under Phase 5

#### **Passive communication**

Freeplay Energy EyeMax AM/FM/Weather-Band Emergency Radio with LED  
Flashlight – Yellow - Power source is rechargeable battery, hand crank  
and solar charging. \$69:  
<http://www.ambientweather.com/freneyamemra1.html>

#### **Cooking**

Coleman Road trip Grill, propane cylinders  
have one 20 lb propane cylinder and adapter, and 12 one lb cylinders as a  
backup. Alternative: standard gas grill

**Refrigeration**

Cooler: 5 –day insulated “super cooler” on wheels

**Sanitation:**

Soap

Toilet Paper

Baby Wipes

Hand sanitizer gel (get lots of this)

**Light**

Handcrank flashlights (Costco)-no batteries needed

LED lanterns: eGear LED Lantern

LED flashlights

Lots of batteries

Long burning emergency candles, matches, lighters

**Heat**

Gas fireplace insert rated as a furnace (eg Heat-n-Glow)

The radiant type doesn't need electric blower to provide heat

Coleman Catalytic Heater-one of the only safe indoor space heaters

Duct tape, plastic sheeting (to preserve heat in the winter if power is out)

**Household Miscellaneous: up to 3 month supply**

paper plates, paper towels, plastic flatware

garbage bags (get more than you think you'll need)

Pet food

Diapers

Biodegradable kitchen waste bags: [www.compost.com](http://www.compost.com)

can bury food refuse in yard or use in composter

Laundry soap

Kerosene lanterns, clear lamp oil

Aluminum foil: regular and heavy duty

Garden vegetable seeds

Toothpaste, shaving cream

Manual cell phone charger: the Sidewinder

Sleeping bags

**Supplies: Medical****Medicines**

General considerations:

Consider vacuum packing medications for storage

Keep in low moisture, low light, stable temperature environment

Azithromycin-for treating secondary pneumonia, otitis media 250mg tablets

Promethazine 50mg

Acetaminophen, Ibuprofen

Diphenhydramine 25mg tablets and elixir

Oseltamivir-Controversial whether it is ethical to keep a supply

Dosage: 75mg BID x 10days/adult (the longer course is indicated for H5N1)

Suspension for children: make certain pharmacy doesn't mix it for you, ask

for the powder and you'll mix it yourself.

Probenecid 500mg tablets #20 per adult. take one twice a day while taking oseltamivir to more than double the serum level of oseltamivir

Loperamide

95 proof grain alcohol, 1 pint (from liquor store) for making oral suspensions of meds

Cocoa butter or other hand lotion ( you are going to be washing your hands a lot!)

90 day supply of regular prescription medications

Sambucol Elderberry Extract: has impressive anti-influenza properties based on 2 well designed RCT's. Available at natural food stores and online.

### **Medical: Ancillary items**

N95 masks Note: can be re-used if dipped in 1:100 bleach solution and air dried

Thermometers

BP cuff

Humidifier

Pill cutter

Nitrile gloves

### **Kid stuff**

Books, games

Home schooling supplies

DVD's, portable player

Look into on-line learning options or setting up a co-op home school in your neighborhood. Schools may be closed for months

**Preparation during Pandemic Alert Phase 5** *(larger clusters of cases with increasing but unsustainable human to human spread suggesting the virus has become more adapted to humans-a pandemic is probably imminent)*

### **Medicines**

Diazepam 5mg

Hydrocodone

Ambien

### **Medical Supplies**

Oxygen concentrators (\$800)

Pulse oximeter (\$250)

Both at [www.portableoxygenconcentrators.com](http://www.portableoxygenconcentrators.com) - will need a prescription

Adult and pediatric feeding tubes and supplies to give oral rehydration to unconscious patients.

Mortar, pestle for compounding meds like Probenecid, Diazepam, etc.

### **Misc Phase 5 items to consider**

HAM radio- find someone in your neighborhood who is licensed or consider learning

Gas - Should consider storing 5-25 gallons of gas. Use "Sta-bil" type additive to ensure it lasts for more than 60 days. Store in a detached location from house

Home defense items: alarm system, pepper spray, other

Generator

-very luxurious to have

-downside: noisy, attracts attention

-diesel generators advantageous as can legally store more diesel than gas

Bullhorn if you are the neighborhood leader

Nature Plus Portable toilets with biodegradable bags: [www.composters.com](http://www.composters.com)

Cash

### **Activities**

Organize a local group of friends and neighbors to help each other through the pandemic

Encourage group to be prepared as well as you are

Work together and plan to ensure security, provide childcare for those ill

Work with your hospital to create a Pandemic Preparedness Committee

### **Thoughts on home treatment of the seriously ill**

Most influenza deaths will be caused by overwhelming viral pneumonia with ARDS, secondary bacterial pneumonia, or dehydration. Critically ill patients with the picture of ARDS will unlikely to be salvageable in the home environment or even the best ICU. Where we can make the most difference will be in simple rehydration measures along with supportive therapy for pneumonia, using oral rehydration, oxygen and antibiotics when indicated. Hospitals could become overwhelmed in the event of a moderate pandemic; home care may be the only option for many.

### **Preparation of "Oral Rehydration Solution" (ORS) *courtesy of Dr. Gratt Woodson***

Adult ORS

To one quart of water, add 1 tsp salt and 3 tbsp sugar

If diarrhea present, use ½ tsp salt and ½ tsp baking soda instead 1 tsp salt

Pt. should consume 3-6 quarts/day, with monitoring of intake and output

Pediatric ORS

To one quart of water add 2/3 tsp salt and 3 tbsp sugar

If diarrhea present use 1/3 tsp salt, 1/3 tsp baking soda, 3tbsp sugar

Consider having two 8 oz baby bottles available. The hole in the nipple can be enlarged and it can be quite useful for someone who's too weak to sit up to drink.

Drinking straws are also useful for the same reason

### **Essential Reading**

[www.fluwikie.com](http://www.fluwikie.com)

[www.pandemicflu.gov](http://www.pandemicflu.gov)  
The Bird Flu Manual by Dr. Grattan Woodson  
The Great Influenza by John Barry