

UN MEDICAL DIRECTORS' GUIDELINES ON ESTABLISHMENT OF A FEVER CLINIC¹

Fever clinics are facilities where patients with symptoms of pandemic influenza can be assessed and managed to minimize influenza transmission in the community. They are a significant part of an organized response to an influenza pandemic within the UN system and will be activated during Level 3 Emergency Mode. While the role played by fever clinics may be different for various duty stations, the level of resources necessary to operate them will depend on the stage of the pandemic and the demand by staff. Where fever clinics are not foreseen in national plans, UN Country Teams should develop plans to establish these facilities.

When large localized clusters of influenza are occurring in the community, fever clinics will be vital to the rapid identification of suspected and confirmed cases, thus allowing the spread of the disease to be delayed through case isolation, rapid treatment and the provisions of antivirals to those at risk, education and information, and infection control practices. When widespread transmission is occurring in the community, fever clinics will provide standardized assessment, triage and management of patients with suspect influenza in accordance with UNCT plans. Cases will be streamed for care in home, or for admission to hospital.

Objectives

The objectives of fever clinics are as follows:

- To provide standardized assessment and triage of suspected cases of pandemic influenza
- To direct cases to the home for self-care or inpatient healthcare facilities
- To decrease patient presentations to the normal healthcare facilities thereby allowing those facilities to continue their core business and reducing the risk of transmission within those settings
- To minimize the number of healthcare workers and other patients exposed to patients with influenza
- To maintain optimal infection control practices

Planning assumptions

As a guide to operational planning, the United Nations System Influenza Coordinator's estimates of illness rate, outpatient visits and hospitalizations may be utilized (refer to UN Medical Directors Guidelines for Pandemic Influenza, 2011). It should be noted, however, that a range of estimates exists, depending on the local circumstances and health seeking behaviour of staff in individual duty stations. For example, WHO states that in refugee and displaced population, all symptomatic patients will seek health care and that an additional 15% of the population will present to outpatient services as the "worried well"². As such, duty stations should always consider their individual situation and use the higher planning figures/estimates for operations planning and management of their fever clinic.

¹ Western Australia Department of Health, "Guidelines for Establishing a Fever Clinic During an Influenza Pandemic", 2007. Available at <http://www.public.health.wa.gov.au/cproot/186/2/feverclinic.pdf>

² For example, in WHO, Pandemic Influenza Preparedness and Mitigation in Refugee and Displaced Populations, WHO guidelines for Humanitarian Agencies, (May 2006), available at http://www.who.int/csr/resources/publications/swineflu/pandemic_preparedness_refugee/en/index.html, WHO

Activation

Fever clinics will be activated in Level 3 Emergency Mode, based on the local situation, the severity of the disease and staff demand. Once activated, fever clinics should be fully operational within 24 hours. The hours of operation will also depend on the local situation and requirements for services.

Site Selection

When assessing potential sites for a fever clinic, considerations should be given to the following:

- **Location:** Close proximity, preferably within walking distance, to medical care facilities designated for inpatient care of influenza patients. The site should be accessible directly from outside and should not require patients to transit through a UN medical care facility or building in order to reach the fever clinic. It should be accessible by staff, with vehicular access with clearly designated areas for asymptomatic staff and suspected cases. Areas for secure storage of pharmaceuticals and equipment should be available.
- **Layout:** The layout should ensure a unidirectional flow of patients from entry to exit. At least a one metre distance between patients should be ensured using adequate signage and proper layout. Separate waiting and assessment areas for patients who meet the case definition of pandemic influenza and those who do not should be designated. Designated staff rest areas, changing rooms, and toilet facilities should be out of public view and in line with infection control practices.
- **Infection control:** The main principles are to limit contact between infected and non-infected patients, protect people caring for influenza patients and contain infectious respiratory secretions. Strict adherence to the infection control guidelines is necessary.³ Infection control training and routine briefing and practice is essential for all non-clinical and clinical staff prior to and ongoing during operation of clinics. Adequate signage to remind staff of correct infection control practices should be positioned in all relevant areas. Areas that are considered clean and contaminated should be clearly designated. Hand washing facilities and surgical masks for patients should be made available at the entry to the fever clinic as well as throughout all areas. Large quantities of medical and regular waste will be generated, therefore secure waste collection bins and frequent waste disposal should be arranged and be in line with national guidance (e.g. incineration).
- **Utilities:** A reliable water and electricity supply, adequate hand washing facilities, storage space and access to hospital telephone and computer networks are required.
- **Ventilation:** There is no evidence to link air conditioning systems with transmission of influenza. Therefore, for planning purposes, separate air conditioning systems for fever clinics are not necessary. Rooms within the fever clinic should be ventilated to the outside.

Operation

- Following triaging and primary assessment, patients will be streamed for further care at home or an inpatient healthcare facility.
 - When homecare is indicated, the physician may have to dispense antiviral medication, provide instruction on its use, educate the patient on the need for home isolation (for those who are ill) or quarantine (for contacts).
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- Telephone or other follow-up of some patients who are streamed for care at home is needed. The collection and recording of the information required to facilitate this follow-up will be an important function of fever clinics.

Human Resources

The numbers and mix of staff will be dependent on the stage of the pandemic and the demand in each situation. However, each fever clinic will require the following at all stages of the pandemic:

- At least one medical officer to provide overall clinical coordination, advice and expertise specifically where complex patients require assessment and management.
- Nurses who are trained in public health triaging and application of case definitions.
- Clerical support staff to manage administrative functions
- Security staff to maintain order, ensure staff safety and issues with inappropriate demand for antiviral medication.
- Adequate cleaning and maintenance staff

Additionally, note the following:

- Working in PPE is hot and tiring. Staff will need frequent breaks when they can remove their PPE, and short shifts.
- Role delineation of staff is important. This may need to be done with color-coded markings or disposable theatre caps, as use of name badges or color-coded uniforms may not be possible with PPE
- All staff require orientation to their role and appropriate training. They also required briefings at the beginning of each shift as case definitions and clinical protocols are likely to change rapidly.
- Additional staff may be required depending on patient case loads.

Material Resources

Minimum requirements for fever clinics include:

- Adequate supplies of PPE according to function and risk of exposure .
- Adequate supplies of consumables to perform an assessment and an adequate supply of drugs, including antibiotics and antivirals, for management in accordance with clinical protocols. Other equipment needed include oxygen and oxygen masks, thermometers, sphygmomanometers, examination tables and privacy curtains, wheelchairs and patient trolleys, specimen containers, hand hygiene products, cleaning products to clean surfaces (1 in 5 dilution of hospital grade bleach, granular chlorine, 70% Isopropyl, ethyl alcohol 60%), clinical waste and linen bags. Some of the equipment may need to be improvised according to local availability.
- Toilet facilities for patients.
- Telephones, at least one facsimile machine and computer workstations.

An example of a patient check list can be found at

http://www.who.int/csr/resources/publications/swineflu/ah1n1_checklist.pdf

The following is a suggested checklist for supplies

Medicines	Medical Supplies
<input type="checkbox"/> Antivirals <input type="checkbox"/> Antibiotics <input type="checkbox"/> Antipyretics <input type="checkbox"/> Antidiarrhoea medication <input type="checkbox"/> Antiemetics <input type="checkbox"/> IV fluid kits for adults and infants (cannulas, lines, IV Fluids: Normal saline, Dextrose Saline, Hartmans, 5% dextrose)	<input type="checkbox"/> Needles <input type="checkbox"/> Syringes <input type="checkbox"/> Simple Surgical masks <input type="checkbox"/> PPE supplies according to risk of exposure <input type="checkbox"/> Mortuary Bags
Examination Room Supplies	ICT
<input type="checkbox"/> Three chairs <input type="checkbox"/> Desk <input type="checkbox"/> Examination Trolley <input type="checkbox"/> Examination Table <input type="checkbox"/> Disposable paper sheeting <input type="checkbox"/> Linen (curtains, pillows, blankets, sheets, pillow slips, towels, linen bags etc) <input type="checkbox"/> Thermometers <input type="checkbox"/> Tongue depressors <input type="checkbox"/> Stethoscope <input type="checkbox"/> Syphgmanometer <input type="checkbox"/> Specium Containers and Swabs <input type="checkbox"/> Alcohol <input type="checkbox"/> Swabs <input type="checkbox"/> Torch (neurological testing equipment kit is possible) <input type="checkbox"/> Orascope <input type="checkbox"/> Oxygen equipment including spare O2 cylinders <input type="checkbox"/> Oxygen Masks and nasal prongs <input type="checkbox"/> Suction equipment including yanker suckers, suction tubing and receptacles <input type="checkbox"/> Wheelchairs <input type="checkbox"/> ECG Machine <input type="checkbox"/> Waste disposal <input type="checkbox"/> Hand washing facilities with hand wash solution or soap, water, paper towel etc.	<input type="checkbox"/> Reception Desk/Counter <input type="checkbox"/> Computer (Network) <input type="checkbox"/> Telephone lines <input type="checkbox"/> Telephones <input type="checkbox"/> Fax Machine <input type="checkbox"/> Pagers <input type="checkbox"/> Designated Mobile Phones <input type="checkbox"/> VHF Radios <input type="checkbox"/> A4 Paper <input type="checkbox"/> Prescription pad <input type="checkbox"/> Patient Notes Folder (manual records) <input type="checkbox"/> Headed note paper <input type="checkbox"/> Stationary Supplies : Pens, Pencils, Post-it Notes, etc
Cleaning Supplies	Sundries
<input type="checkbox"/> Refuse Bags (plain and clinical waste) <input type="checkbox"/> Detergent <input type="checkbox"/> Hospital Grade Bleach, granular chlorine <input type="checkbox"/> Alcohol for Cleaning (70% Isopropyl or 60% ethyl alcohol) <input type="checkbox"/> Mops <input type="checkbox"/> Buckets (2 sided, one side for clean water, one for dirty) <input type="checkbox"/> Cleaning clothes, dusters etc <input type="checkbox"/> Toilet sanitizer <input type="checkbox"/> Air freshener <input type="checkbox"/> Secure Rubbish Bins	<input type="checkbox"/> Hand Soap <input type="checkbox"/> Toilet Paper <input type="checkbox"/> Paper Towels