**MOST URGENT – TOP PRIORITY**

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Address</th>
<th>Phone No.</th>
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<tr>
<td>Mumtaz Bakhtawar Hospital (Wahdat Road)</td>
<td>Wahdat Road, Opposite Allama Iqbal Town, Lahore</td>
<td>5422639</td>
</tr>
<tr>
<td></td>
<td>Fax 35434960</td>
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<tr>
<td></td>
<td>Phone No. 35321675</td>
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<tr>
<td></td>
<td>Royal Center Hospital, Wapda Town</td>
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<td>Farooq Hospital, 262-263, West Wood Society, Thokar Niaz Baig</td>
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<td>Sadan Hospital, 391-E Block, Main Boulevard, Johar Town</td>
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<td>Turab Hospital, Plot No. 33, Block No. 5, Sector B-1, Township LHR</td>
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<td>Saira Memorial Hospital</td>
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<td>Sarwat Anwar Medical Complex</td>
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<td>Al-Shafi Hospital</td>
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**NO. S.O. (PH) 9-98 / 2002 (14)**

GOVERNMENT OF THE PUNJAB

HEALTH DEPARTMENT

Dated Lahore, the 8th April, 2014
<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Address</th>
<th>Phone No.</th>
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<tbody>
<tr>
<td>Al-Ehsan Hospital</td>
<td>Main Shallimar Link Road, Mughalpura</td>
<td>36830303</td>
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<td>Fazal Hospital</td>
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<td>Bajwa Hospital, 109-G.T.Road, Shahdara Lahore</td>
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<td>Razzaq Hospital</td>
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<td>Zahida Welfare</td>
<td>Shallimar Link Road Lahore</td>
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<tr>
<td>Arif Memorial Teaching Hospital</td>
<td>Lahore Kasur Road, Near Mustafabad, Lahore</td>
<td>0492451092-5</td>
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<tr>
<td>Avicenna Hospital</td>
<td>Bedian Road, Lahore</td>
<td>+923228400976</td>
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<tr>
<td>National Hospital</td>
<td>DHA, 132/3, Block L, DHA, Lahore</td>
<td>111171819</td>
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<tr>
<td>Adil Hospital</td>
<td>Main Boulevard, Defence Housing Authority, Lahore</td>
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<tr>
<td>DHA Medical Center</td>
<td>W- Block, Phase-III, DHA, Lahore</td>
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<td>Lahore Cantt, 44-45, Cavalry Ground Extension, Lahore Cantt</td>
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<td>Surayya Azeem Hospital</td>
<td>5-Bahawalpur Road, Chouburji Chowk, Lahore</td>
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<td>Railway Cairn Hospital</td>
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<td>Zikaraya Hospital</td>
<td>Ravi Road, Opposite to Dental Hospital Lahore</td>
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<td>Medicare Badami Bagh</td>
<td>(Masoom Shah Chowk) Address: Badami Bagh</td>
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<td>Mansoor Hospital</td>
<td>Multan Road Lahore</td>
<td>35416383</td>
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<tr>
<td>Kishwar Fazal Hospital</td>
<td>6-Km, Yateem Khana Chowk, Faizpur Interchange LHR</td>
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<td>Akhtar Saeed Trust Hospital</td>
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<td>Bahria Town Hospital</td>
<td>Takbeer Block Sector B, Bahria Town LHR</td>
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SUBJECT: **ENHANCED SURVEILLANCE GUIDELINES FOR SEASONAL INFLUENZA (H1N1) IN ALL DISTRICTS OF PUNJAB.**

I am directed to refer to the subject captioned as above.

2. The control of communicable disease and prevention of outbreaks is one of the top priority agenda of the Government of Punjab. A high level meeting was convened in the Committee Room of the Health Department on 7th April, 2014 under the chairmanship of Secretary / Special Secretary Health, to discuss the prevailing situation of H1N1 influenza in Punjab and to review the steps taken to respond and control the situation. So far, total of 50 suspected cases are reported in Punjab with 24 confirmed cases for Influenza-A H1N1 in Punjab.

3. It is observed that majority of the cases are reported from Nishter Hospital, Multan and belonging to Multan District. Few cases also hailed from neighboring districts like Khanewal, Dera Ghazi Khan, Rajanpur and Jhang. Similarly, some influenza, are reported in Lahore, Gujranwala and Rawalpindi areas as well.

4. Keeping in view the seasonality of Influenza, it is decided to enhance the Surveillance of influenza throughout the province for early detection and control. The objective is to strengthen the early warning system for controlling the spread of the disease. This guideline is meant to enhance the surveillance and diagnostic capacities for Influenza and other Acute Respiratory Infections (ARIs), using the existing infrastructure and reources. To accomplish this objective, all the District Health Authorities and hospitals are required to focus on following events and in case any such unusual event is noticed (satisfying the case definitions) immediately intimate the Provincial Epidemic Prevention and Control Cell and take immediate actions according to the WHO Guidelines. These events are:

1. **Suspected H1N1 Influenza**
   
   **Case Definition:** an individual presenting with: high fever ≥ 38°C, AND One or more of the following respiratory symptoms: cough, shortness of breath, body ache, difficulty in breathing, AND One or more of the following: close contact with a person diagnosed as influenza A (H1N1) or recent travel to an area with reported foci of transmission of influenza A (H1N1)

2. **Influenza Like Illness (ILI)**
Case Definition:
A Suspected Case of influenza-A (H1N1) virus infection is defined as a person presenting with a sudden onset of fever ≥ 38 °C and cough or sore throat, in the absence of other diagnosis.

A Probable Case of Influenza-A (H1N1) virus infection is defined as a person with an acute febrile respiratory illness who:
- Is positive for influenza A, but unsusceptible for H1 and H3 by influenza RT-PCR or reagents used to detect seasonal influenza virus infection; or
- Is positive for influenza A by an influenza rapid test or an influenza Immuno-Fluorescence Assay (IFA) plus meets criteria for a suspected case;
- Individual with a clinically compatible illness who died of an unexplained acute respiratory illness who is considered to be epidemiologically to be a probable or confirmed case.

A Confirmed Case of influenza-A (H1N1) virus infection is defined as a person with an acute febrile respiratory illness with laboratory confirmed Influenza-A (H1N1) virus infection at WHO approved laboratories by one or more of the following tests:
- Real Time PCR
- Viral Culture
- Four-Fold rise in Influenza-A (H1N1) virus specific neutralizing antibodies

3. Severe Acute Respiratory Infection (SARI)
Case Definition: Meets ICI case definition (sudden onset of fever ≥ 38 °C and cough or sore throat, in the absence of other diagnosis), AND Shortness of breath or difficulty breathing, AND Requiring hospital admission.

4. Cluster of Atypical Pneumonia
A cluster is defined as two or more persons presenting with manifestations of unexplained, acute respiratory illness with fever ≥ 38 °C or who died of an unexplained respiratory illness that are detected with onset of illness within a period of 14 days and in the same geographical area and/or are epidemiologically linked.

5. Acute Respiratory Syndrome
Definition: Acute onset of cough or respiratory distress (e.g. tachypnoea, chest recession, dyspnoea, cyanosis) AND severe illness WITH an absence of known predisposing factors.

The suspected cases meeting the above mentioned criteria, are required to be isolated and samples for laboratory confirmation should be collected and sent to NIH-Islamabad. The sampling techniques and guidelines are also attached with this letter.

SPECIMEN COLLECTION FOR H1N1 INFLUENZA:

- The person collecting specimens for the diagnosis of H1N1 must make proper use of Personal Protective Equipment (PPE).
- PPE is essential but is not the whole answer. Those taking samples should comply with all recommended infection control precautions including specific personal hygiene measures, and the correct use of disinfectants.

(iii) Preferred samples
- Upper respiratory tract: posterior-pharyngeal (throat) swabs are the best sample for detecting influenza A/H1N1.
- Lower respiratory tract: If the patient is intubated, take a tracheal aspirate

(iv) Secondary samples
- Nasal swabs with nasal secretions (from the anterior turbinate area) (if other 'flu is suspected)

When to collect the specimens from suspected cases?
- Take initial throat swab within 3 days of onset of symptoms.
- Ideally collect initial specimen (respiratory and blood) before anti-viral therapy with Oseltamivir (Tamiflu) or other anti-virals is begun. (Do not delay treatment in order to take samples).
- Collect specimens from deceased patients as soon as possible after death.

Sampling human contacts (of cases)
- Observe contacts of human patients for 7 days after the last contact (daily temperature reading). If they become ill with a flu-like illness sample as outlined above.

How to collect Sample:
Use only sterile dacron or rayon swabs with plastic shafts. Do not use calcium alginate or cotton swabs or swabs with wooden sticks, as they may contain substances that inactivate viruses and inhibit PCR testing.

- Prepare two vials containing at least 2-3 ml of a suitable Viral Transport Medium (VTM) for each sample. These should be marked with:
  - a unique identifier
  - the sample date
  - The type of sample in the tube (e.g. blood serum, throat swab etc.).
- Take two samples and put one into each vial.
- If VTM is not available or if specimens cannot be stored at appropriate temperatures, swabs can be stored and shipped in absolute (100%) Ethanol.
- Put 1-2ml ethanol into a vial and put the swab tip into the tube.

N.B: Such samples are suitable only for PCR.

Posterior pharyngeal swab (Throat swab)
- Hold the tongue out of the way with a tongue depressor.
- Swab the pharynx by rotating the tip of the swab vigorously. Move the uvula out of the way and swab the posterior pharynx. Avoid touching the tongue with the swab tip.
- Put the swab into VTM.

Nasopharyngeal swab
- Insert a flexible, fine-shafted polyester swab into the nostril and back to the nasopharynx.
- Slide swab straight into the nostril with the patient's head held slightly back.
- The swab is inserted following the base of the nostril towards the auditory pit and will need to be inserting at least 5-6 cm in adults.
- (Do NOT use rigid shafted swabs for this sampling method)
- Leave the swab in place for a few seconds
- Withdraw slowly with a rotating motion
- Put the swab into VTM.
- Use a 2nd swab for the other nostril and put into a second tube. This can serve as the second sample from the patient.

Specimens from patients who have died
As soon as possible after death
- If the corpse has an endo-tracheal tube, collect a deep endo-tracheal aspirate from both lungs.
- Or take a needle aspiration of material from the lungs.
- Throat swabs, nasopharyngeal aspirates or stool samples may also be collected if time, sampling materials and safety considerations permit.

Storing specimens:
- Avoid repeated freezing and thawing of specimens
- If specimens in VTM (or blood serum/plasma) for viral isolation can be taken to the laboratory within 4 days, store at 4°C and freeze at -70°C on arrival.
- Otherwise freeze at or below -70°C until transported to the laboratory.
- The virus does not survive well at -20°C
- Store ethanol-preserved swabs at 4°C in a standard refrigerator.
- Do not store or ship specimens for virus isolation in dry ice (solid CO₂) unless sealed in glass or sealed, taped and double plastic-bagged. (CO₂ can inactivate influenza A).

NB: Do not to seal any container with dry ice in it as it could explode.

MANAGEMENT GUIDELINES:

Home Care:
- Influenza patients visiting hospitals, should be advised following measures for home care:
  - Influenza patients staying at home away from contacts, take plenty of fluids, covering coughs and sneezes (do not spit) and washing hands, frequently may help to reduce the spread. If soap and water are available, use a hand sanitizer;
  - Inform family and friends about your illness and try to avoid contact with people;
  - Contact your doctor or healthcare provider and report your symptoms;
  - Cover your nose and mouth during travel;

Hospital Care:
- WHO guidelines for use of antiviral medicines, which refer to both seasonal and pandemic influenza, should continue to be followed (See attached Algorithm)
  - Treatment with antiviral should be started within 48 hours after onset of illness for better clinical results.
  - For hospitalized patients with suspected influenza H1N1, empirical antiviral treatment with oral or enteric Oseltamivir should be started as soon as possible with waiting lab results.
  - For outpatients who are at higher risk for complications from influenza, neuraminidase inhibitor as soon as possible is also recommended.
6. The Provincial Epidemic Prevention and Control (EP&C) Cell may be contacted for any support and guidance. DEWS Surveillance Officers of WHO based at Lahore, Rawalpindi and Multan are available for facilitation for their respective divisions. Viral Transport Media (VTM) for transportation of laboratory samples is available at selected teaching hospitals and the remaining hospitals are advised to contact DEWS Surveillance coordinator of WHO to get VTM. All samples must be sent with prescribed lab request form for SARI cases. In case of any guidance, you are requested to please contact Dr. Jafer Ilyas, Additional Director Health Services (EP&C) (0300-9515803) O/o Director General, Health Services, Punjab, 24-Cooper Road, Lahore. A set of WHO approved Guidelines / SoPs for Infection Control, is attached herewith for ready reference.

7. All are requested to carry out these instructions in true letter and spirit.

(FARASAT IQBAL)
SPECIAL SECRETARY HEALTH

NO & DATE EVEN

Copy of the above is forwarded for information and necessary action to the:
1. Advisor to the Chief Minister, Punjab on Health.
2. Secretary to the Chief Minister, Punjab.
3. Director General, Health Services, Punjab, Lahore.
5. P.S.O. to Chief Secretary, Punjab.
6. All the Divisional Commissioners in the Punjab.
7. All the Divisional Director Health Services in the Punjab.
8. All the District Coordination Officers in the Punjab.
9. P.S.O. to Secretary to Government of the Punjab, Health Department.
10. P.S. to Special Secretary to Government of the Punjab, Health Department.

(DR. NASIR MAHMOOD SHAKIR)
DEPUTY SECRETARY (ME)