

**Emergency preparedness &
Response (during Influenza
A H1N1 pandemic) at an
International Airport:
Experiences from IGIA, New
Delhi**

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Emergency Preparedness for PHEIC

- SARS Experience:
 - Manpower exposure to screening
 - PHEIC Action plan by MOH&FW / DGHS
 - Strengthening – manpower, transportation, Back-up support (sample testing/referral and logistics)
 - Inter-sectoral coordination
- Avian Influenza:-
 - Trained manpower availability
 - Tamiflu, PPEs & Back-up
- IHR -2005

PHEIC -Influenza A (H1N1)

- Declaration by WHO DG -
- PHEIC Action plan by MOH&FW / DGHS
- JOINT monitoring group –
 - DG, IHR Focal point
 - Epidemiologists, Microbiologists, Nodal officers from hospitals, nodal officer - entry points,
 - ICMR, NCDC, UNICEF, WHO country contact point
- Periodic review of situation and planning strategy
- PHEIC action plan (intended for use in Phase 5 & 6)

PHEIC – Influenza A (H1N1)

- **Five broad areas of strategic approach for health sector:**
 - Surveillance and early detection
 - Pharmaceutical intervention
 - Non-Pharmaceutical intervention
 - Clinical management and
 - Risk communication.

PHEIC – Influenza A (H1N1)

- **Swine Flu virus:** re-assorted with antigenic segments from American swine, Eurasian swine, Avian and Human influenza virus
- **Areas affected:** Started from Mexico on 18th March 2009 then spread to USA, Canada
- **S/s:**
- **Mode of transmission:** droplet
- **Incubation Period:** 1 to 7 days (period of communicability – 1 day before to 7 days after onset of s/s), longer in children
- **Morbidity/Mortality:**

PHEIC – Intervention strategy

- **Phase wise approach advocated** by WHO for averting avian influenza and for containment of Novel virus that could emerge
- Behavior of this or mutant virus in Indian population not known, hence
 - Surveillance & Response at POE- Early detection
 - Community early detection of clusters of ILI
 - Laboratory surveillance
- Laboratory confirmation of case
- Pharmaceutical intervention
- Preparedness – Hospitals & laboratories

Surveillance & Response at POE

- **Measures for Humans:-**

- Entry Screening – Health screening forms / temperature recording / suspect case examination
- Suspect case and Contacts
- Isolation & Transportation of suspects
- Laboratory confirmation
- Management of Cases and Contacts

- **Measures for conveyances:-**

- Disinsection requirements
- Stock of PPEs, SOPs for handling suspects and assistance

Entry Screening for – Suspect & Contacts

- Airlines – orientation training and guidelines to AOC
 - Announcement after embarkation regarding S/s, PPEs availability, procedure on arrival, distribution of Health screening forms (self declaration)
 - Surveillance during travel for suspects
 - Inform APHO – disinsection details, illness details, assist passenger clearance, contact tracing & feedback on suspect case confirmation, Crew- self monitoring and de-rostering
- Health screening at health counters – Health forms / temperature recording / suspect case examination
- Immigration – Inspection of Health clearance , Travel to affected areas, Contact tracing

Entry Screening

- Travelers – screening of passengers who are coming from affected areas/ All areas
- Suspect passengers identification/examination
 - Travel from affected areas and sign / symptoms
- PPEs, Isolation/transportation, sample collection, transportation for examination to NCDC
- Contact tracing - Passenger seating plan from airlines
- Contacts – advice regarding s/s, prophylaxis, safe distance, control room,

Entry Screening- Strengthening

- **MANPOWER(Orientation training)**
 - **Doctors & staff Nurses – 40**
 - No -40 + Additional nurses/Paramedicals
 - Orientation training – Influenza A H₁N₁, WHO Alert, MOHFW guidelines, SOP for screening, suspect case examination, use of PPEs
 - **Immigration -Orientation training – Influenza A H₁N₁, WHO Alert, MOHFW guidelines, procedure for clearance**
 - **Other stakeholder agencies - Airlines, CISF, &DIAL ground staff - Orientation training - roles & responsibilities during surveillance & Response**
- **Supervision and Monitoring** –suspect case examination, cross-checking of health forms distribution, GD examination, PPEs, availability of logistics, disinsection of rooms, ambulance, isolation facility

Entry Screening

Logistics – Health counters, Health screening forms, thermometers, disinfectant hand rub, PPEs, Health clearance stamp, Examination/Isolation room, Transportation ambulance

SOPs – entry screening, suspect examination, isolation, transportation, sample collection, disinsection – rooms, aircraft and ambulance, PPEs use, contact tracing, treatment protocols, prophylaxis, discharge, follow -up

Response - Case & Contact

- **Contact** - Listing of health forms from passengers seated 3 rows in front/behind and in same row as suspect case – house to house visits, contacts among admitted suspects, prophylaxis, IEC, Screening staff, stakeholder staff, high risk group contacts
- **Suspects** – Laboratory report – positive/negative
 - Negative – discharge – prophylaxis + IEC
 - Positive – negative pressure room, isolation
 - Case management – clinical protocol,
 - PPEs – doctors/ staff nurses, ambulance drivers, fumigation staff, food care takers
 - Disinfection – room & belongings

ISOLATION HOSPITAL at IGI

- APHO isolation facility
 - Isolation rooms – 6
 - Isolation beds – 23
 - Isolation rooms with 6-8 air exchanges / hr. facility -2
(Isolation with ICU Beds -2)
- All rooms with attached wash rooms, LCD TVs, screens and separate logistics
- One attendant for 6 beds
- Provided free of cost laboratory testing, treatment and food during admission for observation in isolation as suspect/confirmed case
- 24x7 ambulance availability for shifting to tertiary care facility

IEC

- Information about disease epidemiology
- Common S/S, danger Signs, PPEs for use, home isolation / quarantine
- Information about laboratory testing facilities
- Information about treatment facilities
- Control room nos.
- Latest updates and resource availability
- Community HELP

PPEs - used

- Triple layer surgical face masks
- N-95 face masks
- Hand gloves
- Gown , Goggle, head cap, shoe cover
- Hand rub sanitizer

ACTIVITIES -regulations

- **IMPLEMENTATION OF**
 - **IHR (2005)**
 - **INDIAN AIRCRAFT (PUBLIC HEALTH) RULES**
 - **Indian Port Health Rules, 1955**
 - **PFA Act 1934**

ACTIVITIES -Routine

- **SURVEILLANCE & RESPONSE at All times**
 - **Yellow fever disease**
 - **International Vaccination Center**
 - **Dead Body clearance**
 - **FOOD & WATER SURVEILLANCE**
 - **Vector CONTROL**
 - **Flight & Medical emergencies**
 - **TRAINING ACTIVITIES for IHR**

ACTIVITIES – Yellow fever disease

- India is potentially receptive country
 - Presence of vector mosquito - Agent
 - Human population is susceptible - Host
 - Climatic conditions – Environment
- Health screening of passengers & crew
- Examination of GD and aircraft Fumigation
- Quarantine activities for yellow fever Ds
- Vaccination for Yellow fever

Surveillance for yellow fever & other communicable diseases

- Health screening of passengers and crew
 - Undertaken by Immigration officials
 - Referred to APHO
- Examination of General Declaration of Health/
passenger manifest

Quarantine - Yellow fever Disease

- Maximum six days from departure time
 - Incubation Period – 6 days
- Mosquito proof rooms
 - Ds. Transmission - Aedes Aegypti Mosquito
- Clinical observation for - S/S
 - Fever
 - Jaundice
 - Blood in Vomitus/stools
 - Shock
- Mortality ranges from 40 – 80%

ACTIVITIES – Routine surveillance

- Public Health Clearance of Dead bodies/human remains
 - Death certificate – cause of death – YF/Infectious disease
 - Embalming certificate
 - NOC from Indian High commission office

Surveillance - Food & Water

- As per the PFA Act.
- Inspection of Flight Kitchen, Food outlets
- VVIP food surveillance
 - Indian VVIPs
 - International Heads of State
- Store inspection, source of procurement, date of Manufacture/expiry/best before
- Sampling for Non-perishable raw materials
- Inspection of perishable/water sampling
- Sampling and testing of instant poisoning in prepared food items

Surveillance – vector control

- *Conveyances – disinsection – Examination of GD*
- *Aedes* mosquito control in and around airport / port
- Pest control in eating establishments

- Public Health emergencies of international concern (PHEICs)

Other activities -routine

- **Medical first aid**
- **Flight emergencies – major & minor**
- **Training activities for immigration officials**
- **Training of the post graduate students and WHO trainees**

Yellow fever vaccination

- International vaccination center
- Vaccine is procured from CRI Kasauli
- 17 D DAKAR VACCINE
- LIVE VACCINE
- DOSE IN 0.5 ML/IM
- Immunity starts after 10 days
- Immunity lasts upto 10 Yrs.

Contraindications and side effects

- Contraindications –
 - Pregnancy
 - Egg allergy
 - H/o immunosuppressive drugs
 - Children < 6 months
- Side Effects –
 - Mild local or systemic reaction
 - Fever low grade 2-3 days later

ENDEMIC COUNTRIES

SOUTH AMERICA

BOLIVIA	BRAZIL	COLAMBIA
EQUADOR	FRENCH GUIANA	GUYANA
PERU	SURINAM	TRINIDAD & TOBAGO
VENEZUELA	PANAMA	

ENDEMIC COUNTRIES

AFRICA

ANGOLA	BENIN	BURKINAFASO
BURUNDI	CAMEROON	CENTRAL AFRICAN REPUBLIC
CHAD	CONGO	EQUATORIAL GUINA
ETHIOPIA	GABON	GAMBIA
GHANA	GUINEA	G.BISSAU
KENYA	IVORY COAST	LIBERIA
MALI	NIGERIA	NIGER
RAWANDA	SENEGAL	SAOTOME& PRINCIPE
SUDAN	SIERRA LEONE	SOMALIA
TOGO	UGANDA	UNITED REP. OF TANZANIA
ZAIRE	ZAMBIA	