



Human Cases of Swine Flu (Influenza A H1N1) Confirmed in Nepal

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Introduction

- Swine flu is a viral zoonotic respiratory disease found in pigs and it is caused by the **type A influenza virus** that transmits to humans.
- World Health Organization (WHO) warned different countries that the virus had the **potential to become a pandemic**, labeling the current outbreak "a public health emergency of international concern."
- During the year **1918 Swine influenza (SI) was first observed** at the time of the pandemic in humans and since that time subtypes H1N1 and H3N2 have been widely reported in pigs, frequently associated with respiratory disease.

Swine flu is a respiratory disease which infects pigs but also people, typically those who have been in contact with pigs.

Symptoms in humans

People-to-people transmission is through coughing, sneezing

The virus

Influenza A subtypes: H1N1, H1N2, H3N1, H3N2, H2N3

New "reassortant" virus forms when genes from different viruses begin to mix

When flu spreads person-to-person, rather than from animals to humans, it can continue to mutate, making it harder to treat or fight off

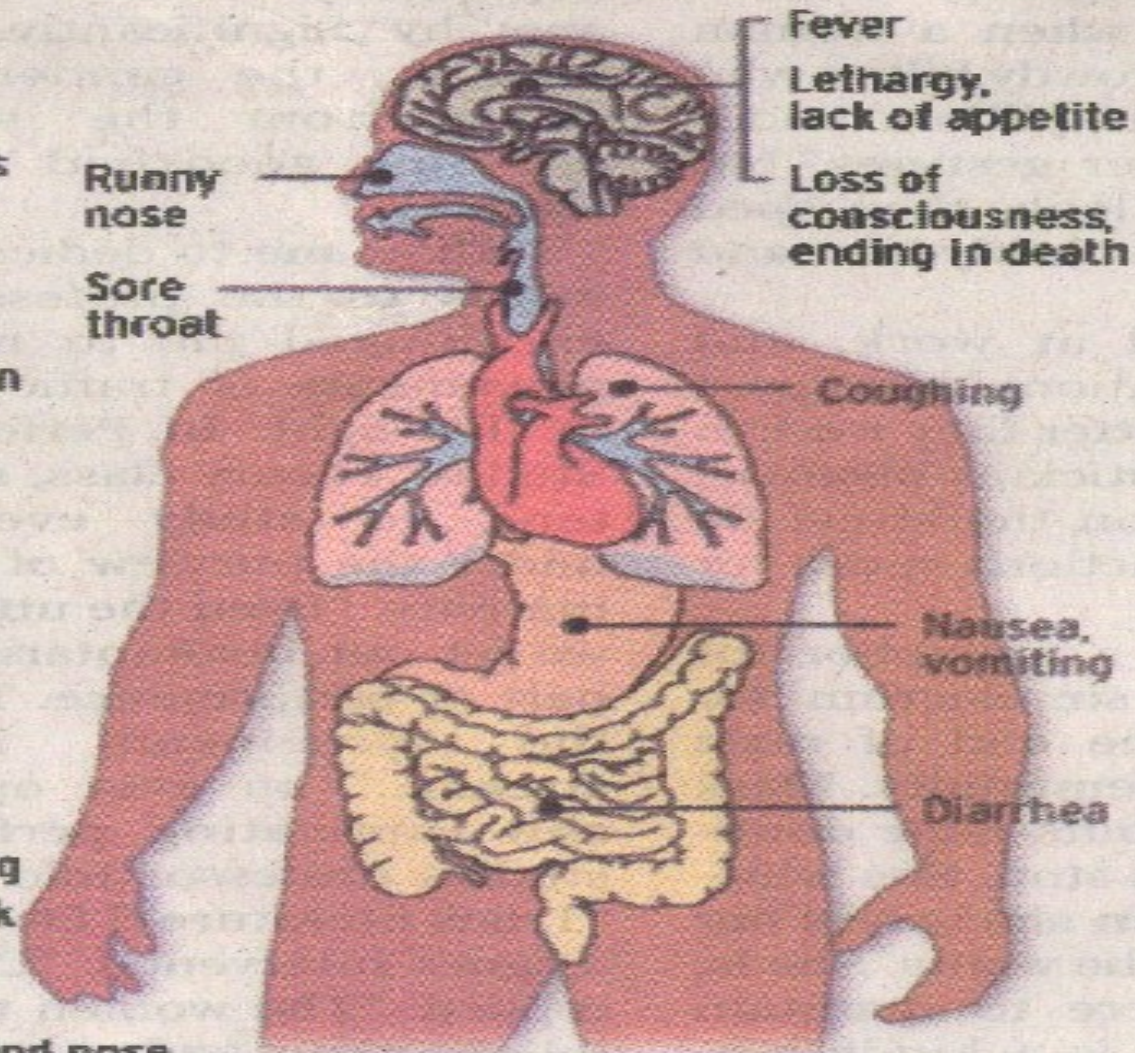
Incubation time 5-10 days

There are no vaccines that contain current swine flu virus causing illness in humans

Precautions advised

- Very frequent hand washing
- Stay at home if you are sick
- Cover your mouth when coughing and sneezing
- Avoid touching your eyes and nose

Source: World Health Organization



McClatchey Tribune



Intro.....cont.

- FAO underlines the great value of the influenza veterinary laboratory network **called OFFLU**.
- The most notorious flu pandemic is thought to have killed at least **40 million people worldwide in 1918-19**. Two other, less deadly flu pandemics struck in 1957 and 1968.



खोटाङको दिक्तेल बजारमा बंगुर पाठा खरिद बिक्री गरिँदै । एक हजारदेखि १५ सय रुपैयाँ पर्ने बंगुर पाठा बिक्रीबाट किसानले मनग्ये फाइदा लिने गरेका छन् ।
तस्विर : उमेश राई/नयाँ पत्रिका

Source: Naya Patrika, May 4, 2009 Photo by: Umet Rai

Intro.....cont.

In children emergency warning signs that need urgent medical attention include:

- Fast breathing or trouble breathing
- Bluish or gray skin color
- Not drinking enough fluids
- Severe or persistent vomiting
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu - like symptoms improve but then return with fever and worse cough

In adults, emergency warning signs that need urgent medical attention include:

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve but then return with fever and worse cough

Source: pandemicflu.gov

Intro.....cont.

- Nepal has remained largely untouched for human death cases so far by swine flu despite the heavy toll it has been taken in India, where close to **200 people have already died**.
- So far, in Nepal only **88 people have contracted** the virus here.
- Of these, **two were foreign** tourists and rest 86 were Nepali workers returning from abroad as well as children.
- There are more than **35,000 people having symptoms** of flu like visited to different hospitals of the country for the diagnosis of swine flu so far.

Swine Flu The Next Pandemic?

How can someone with swine flu infect others?

People with the flu can infect others 1 day before symptoms appear and up to 7 or more days after becoming sick



◀ The H1N1 virus

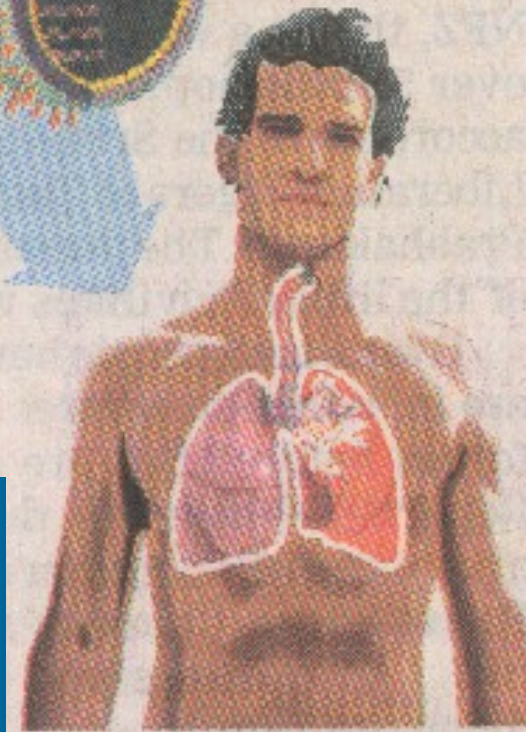


Why is it dangerous?

Because the new virus, while resembling a swine H1N1 virus, contains avian flu and human flu sequences as well. Has caused several deaths in Mexico

Do you need to be worried?

In India, there were more than 200 swine flu cases.

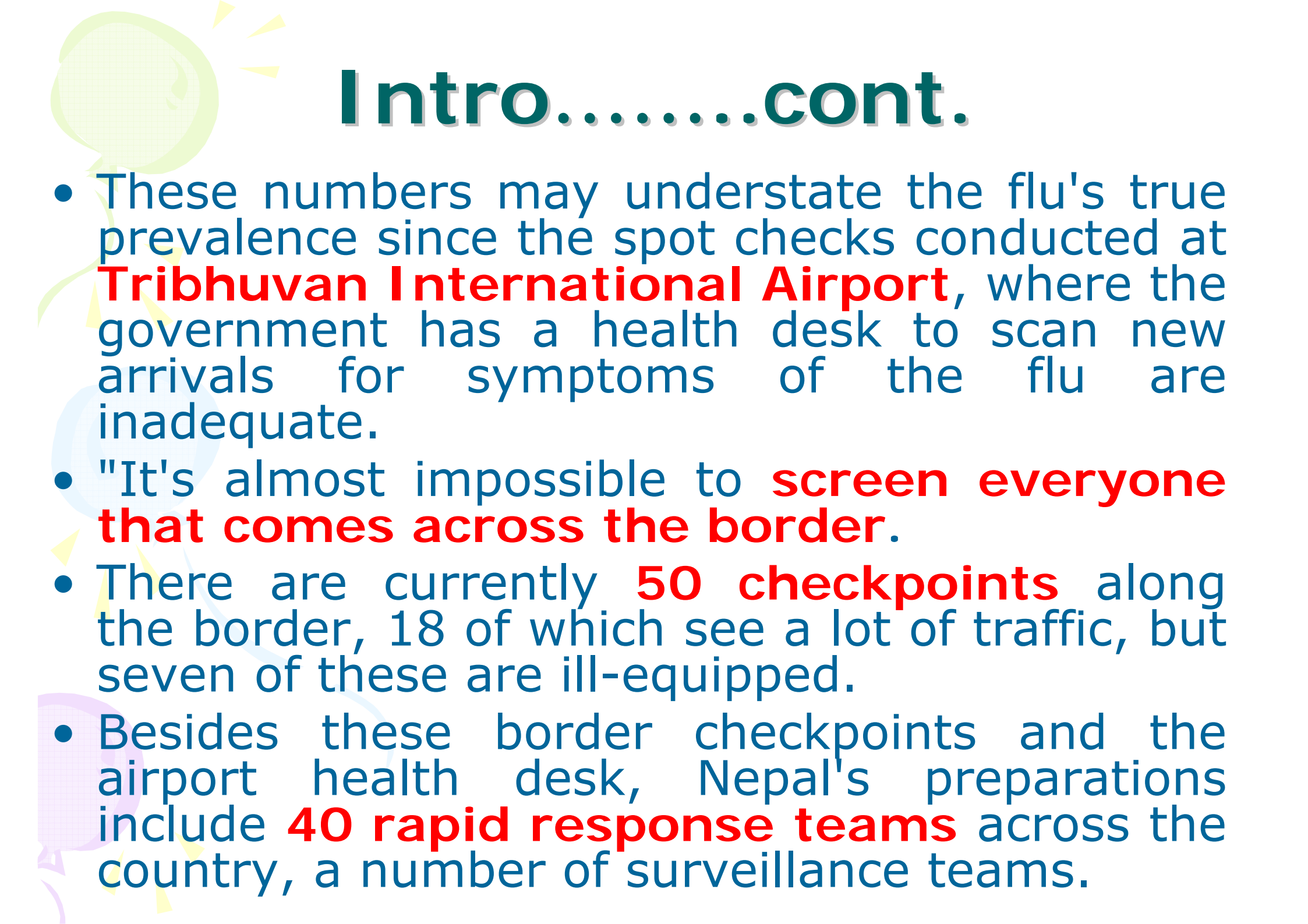


Source: The Time of India October 2009 photo by Rupall Mukherjee/TNN



NEPAL WAKES UP TO THE THREAT

Source: The Kathmandu Post, April, 30, 2009



Intro.....cont.

- These numbers may understate the flu's true prevalence since the spot checks conducted at **Tribhuvan International Airport**, where the government has a health desk to scan new arrivals for symptoms of the flu are inadequate.
- "It's almost impossible to **screen everyone that comes across the border**.
- There are currently **50 checkpoints** along the border, 18 of which see a lot of traffic, but seven of these are ill-equipped.
- Besides these border checkpoints and the airport health desk, Nepal's preparations include **40 rapid response teams** across the country, a number of surveillance teams.



Intro.....cont.

- WHO has declared the event as Public Health Emergency of International Concern under **International Health Regulation (2005)**.
 - **WHO Director-General Margaret Chan** noted the virus had "quickly demonstrated its capacity to spread easily from one person to another, to spread widely within an affected country and to **spread rapidly to additional countries.**"
 - The WHO has declared the swine flu **death number worldwide is 7,826** November 28, 2009.
- 
- 



HIGH ALERT: Following the government's announcement of high alert against swine flu, general public in the Kathmandu valley seem to be taking precautionary measures by wearing masks. (Photo: Ramesh/TRN)

Source: The Rising Nepal, July 1, 2009 (Photo by Ramesh/TRN)

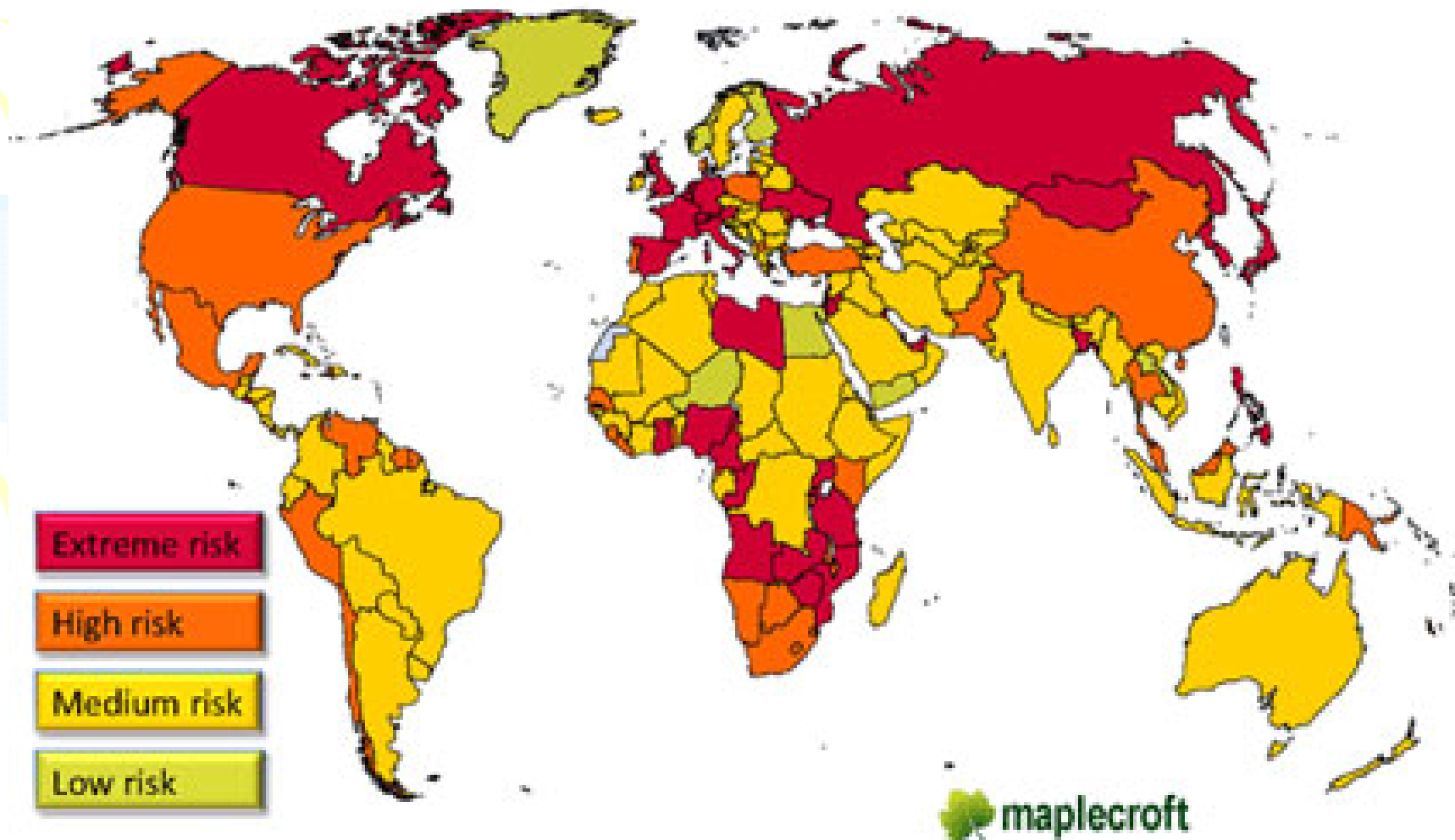
Swine flu

As of May 20th 2009



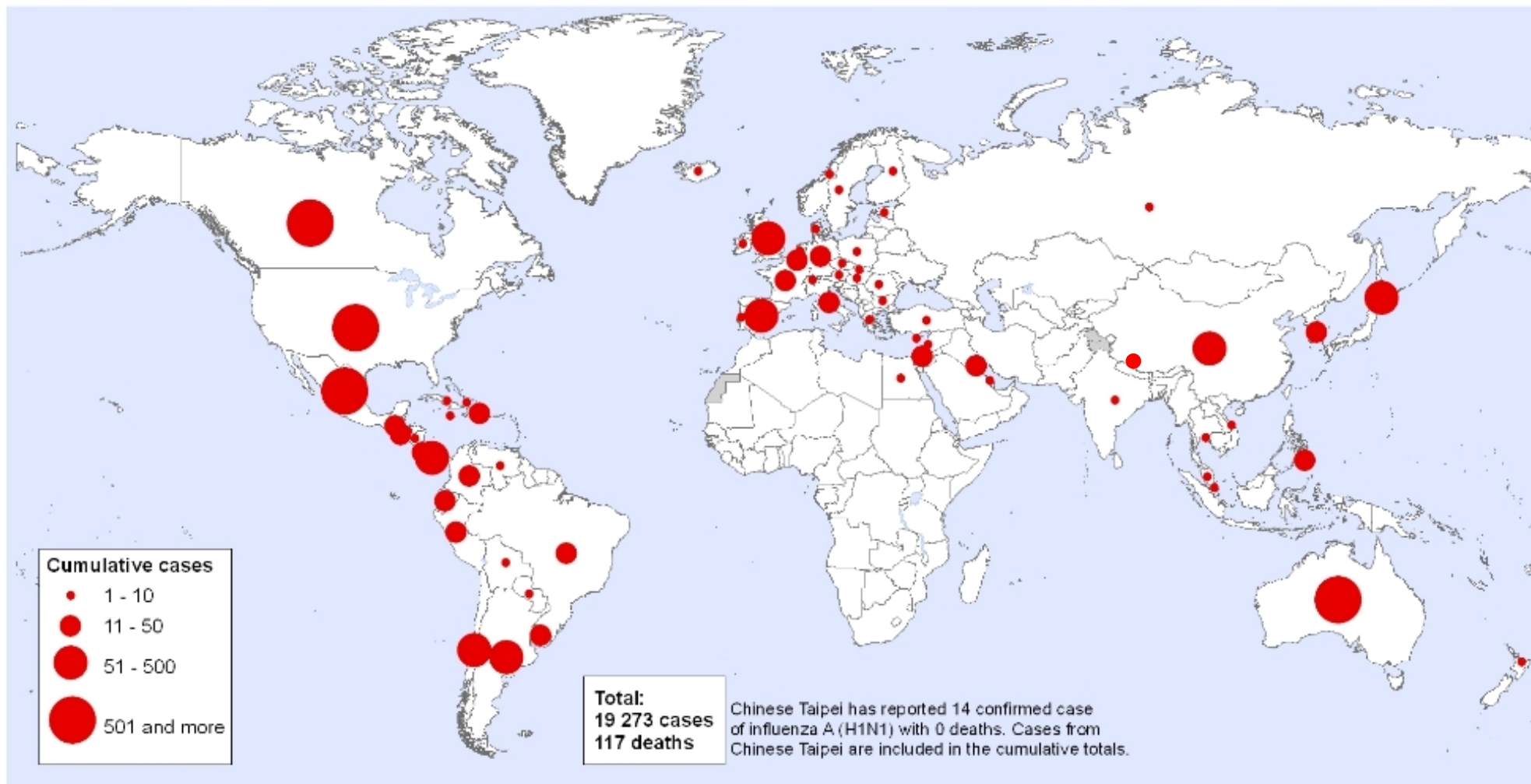
Source: WHO

Risk of Spread



New Influenza A (H1N1), Number of laboratory confirmed cases as reported to WHO

Status as of 03 June 2009
06:00 GMT



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Map produced: 03 June 2009 07:28 GMT

Data Source: World Health Organization
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization



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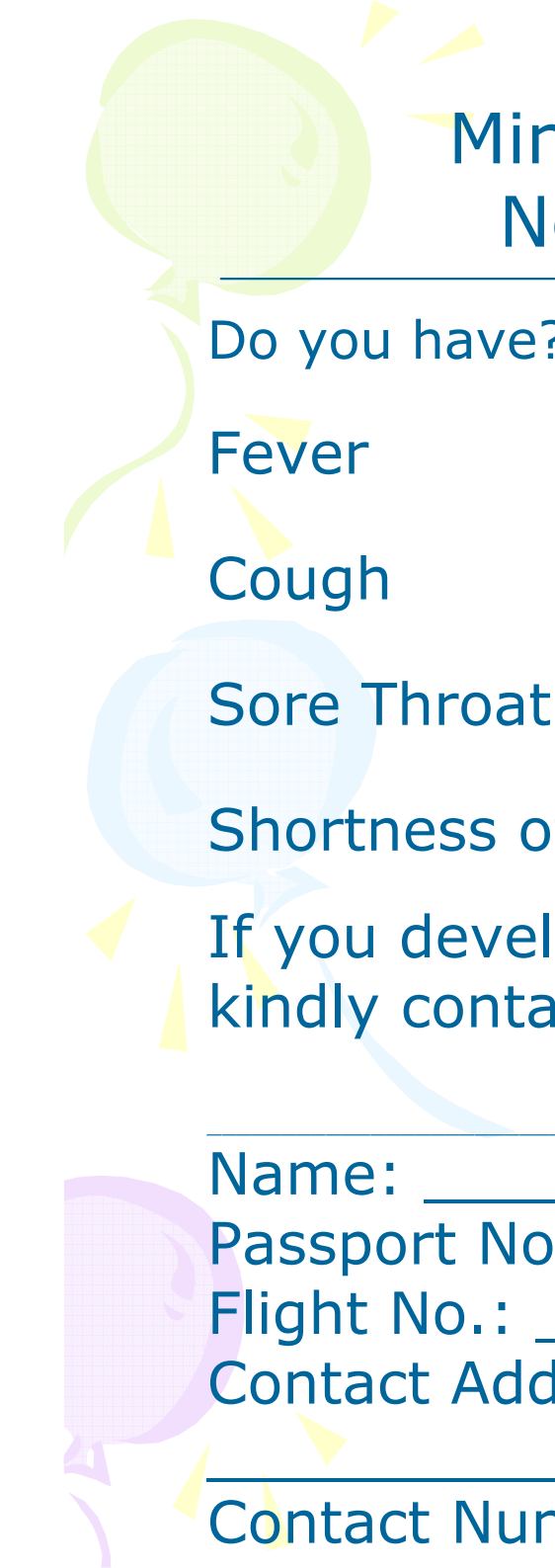
Objectives

- To carryout swine flu surveillanc study among all people traveling from abroad at the Tribhuvan International Airport (TIA) Kathmandu as well as main border health check posts with India and People Republic of China.



Methodology

- After the onset of swine outbreak in India the government of Nepal **established seven swine flu screening desks** at Nepal-India border checkpoints and one at TIA.
 - The government has maintained **Rapid Response Team at 75 places** across the country. **Since June 29, the day when the first case of Influenza AH1N1 was found in Nepal,** government of Nepal the Ministry of Health and Population has developed a response plan with the technical support of World Health Organization.
 - It has **deployed surveillance systems** across the country.
- 



Government of Nepal

Ministry of Health and Population

New A (H1N1) Screening Card

Do you have?

Fever

Yes No AND

Cough

Yes No OR

Sore Throat

Yes No OR

Shortness of Breathe

Yes No

If you develop the above symptoms in the next 7 days,
kindly contact the following number for further details.

01-4255796

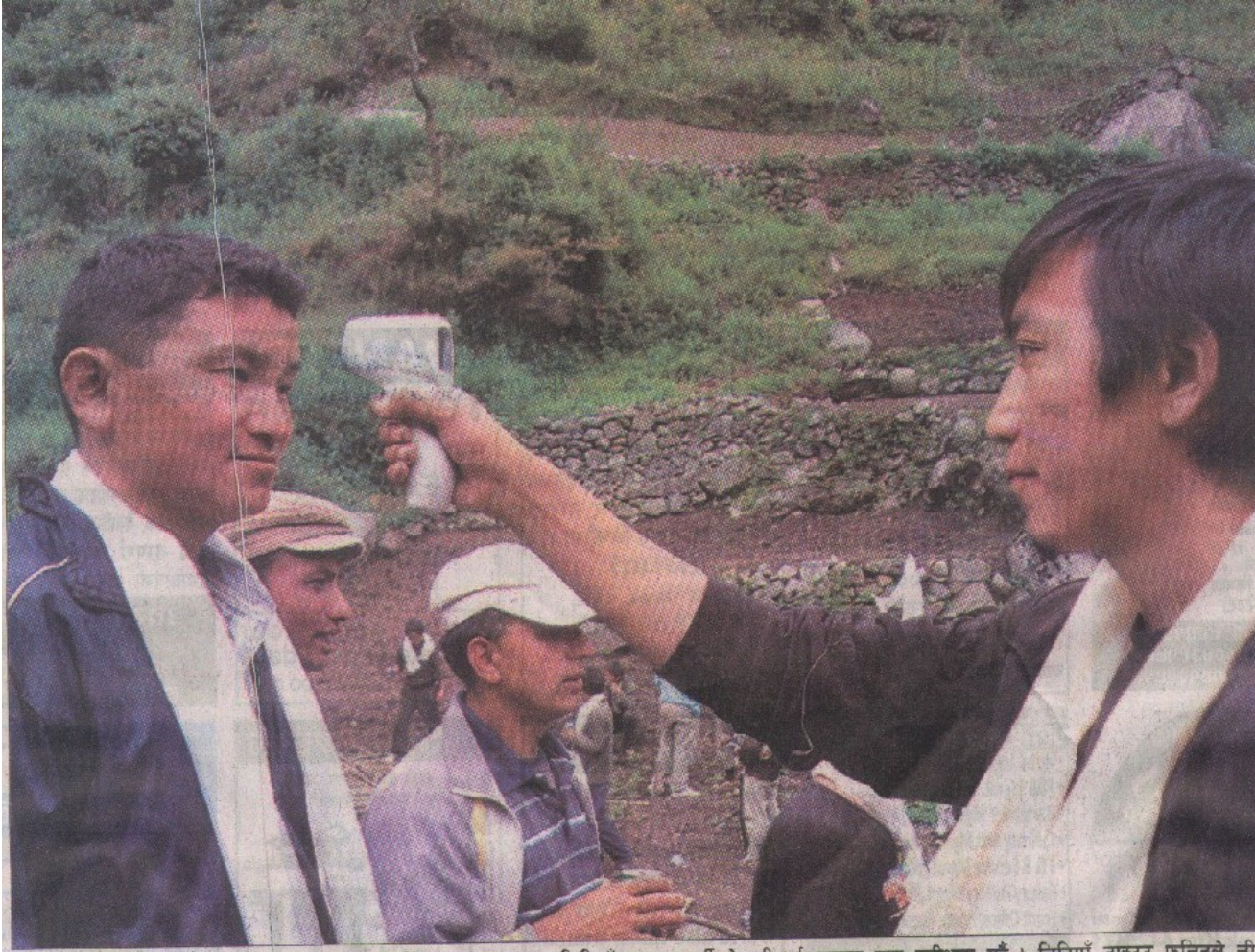
Name: _____

Passport No.: _____ (Country: _____)

Flight No.: _____ Seat No.: _____

Contact Address in Nepal: _____

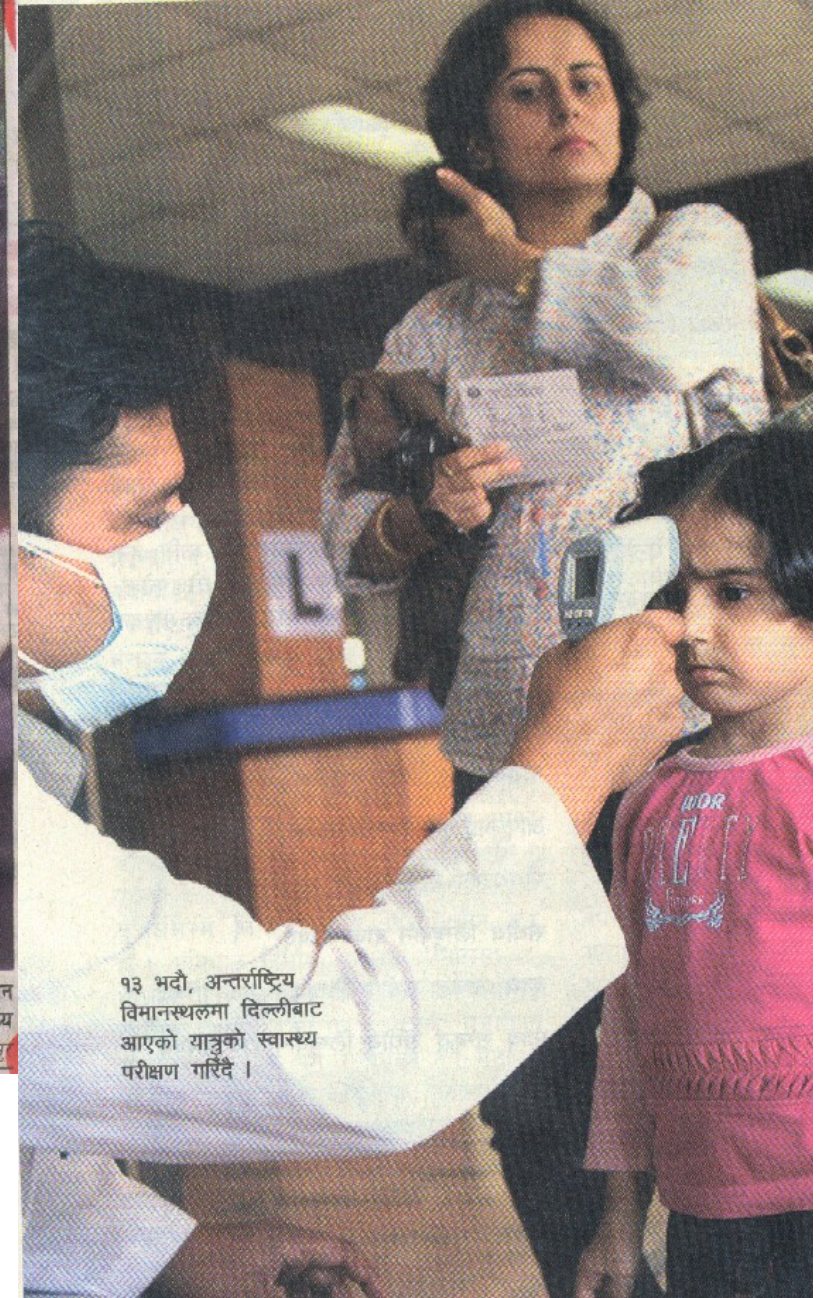
Contact Number in Nepal: _____



जीवो स्वाइन फ्लु छ छैन

सीमावर्ती संखुवासभाको किमाथाका नाकामा चिनियाँ स्वास्थ्यकर्मी नेपालीलाई स्वाइन फ्लु परीक्षण गर्दै । चिनियाँ डाक्टर फुचिनले चीन प्रवेश गर्नेलाई परीक्षण गरेर मात्र अनुमति दिने गरेका छन् । चिकित्सक फुचिनका अनुसार दैनिक उनले सयभन्दा बढी नेपालीको स्वास्थ्य परीक्षण गरेर मात्र चीन प्रवेश गर्न बिन्छन् ।

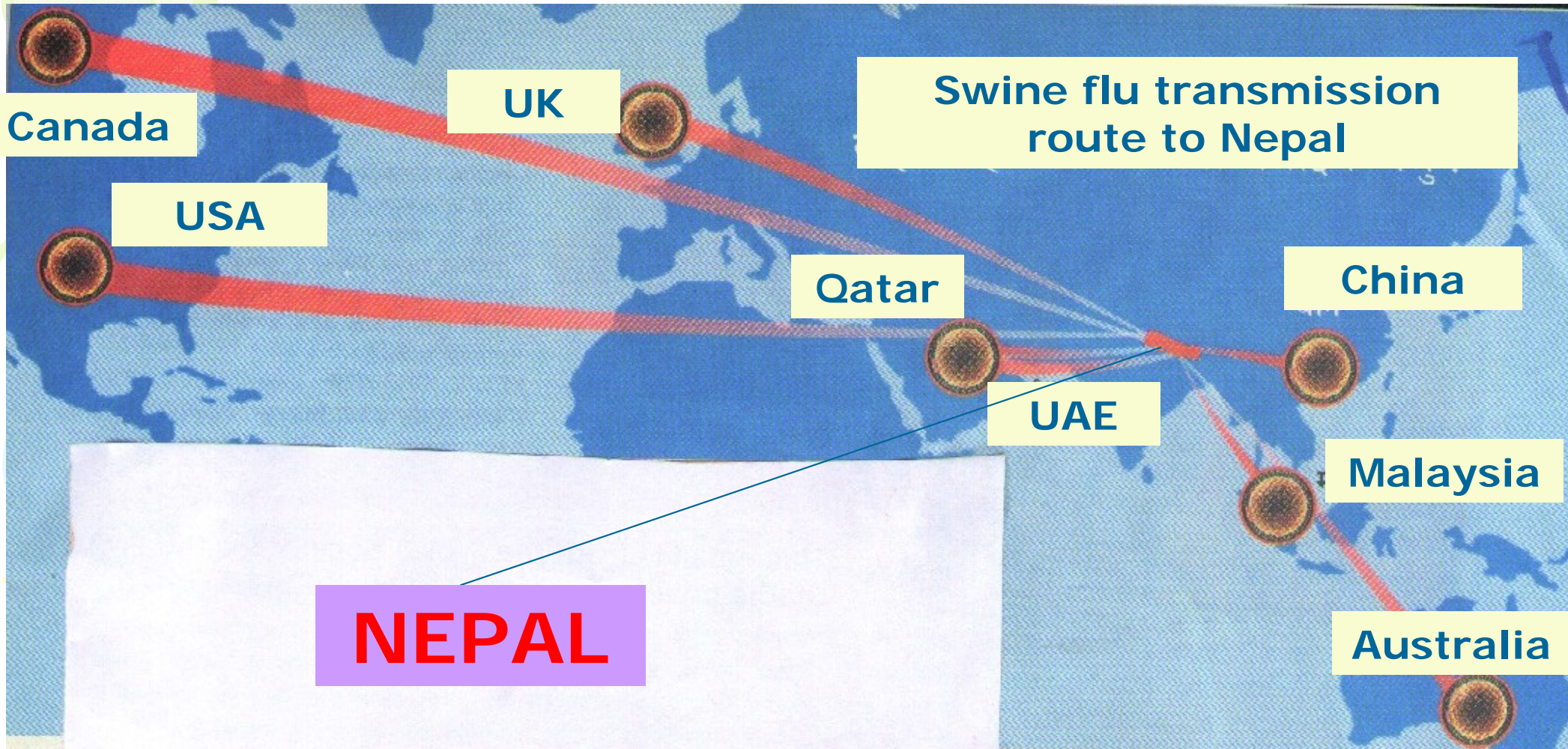
तस्विर : सुरेन्द्र सुवेदी / कान्तिपुर



१३ भदौ, अन्तर्राष्ट्रिय विमानस्थलमा दिल्लीबाट आएको यात्रुको स्वास्थ्य परीक्षण गरिँदै ।

Source: Kantipur, June 9, 2009 Photo by: Surendra Subedi.

Clinical examination of all the passenger at the Kathmandu airport by medical team.



Source: Himal News Paper Weekly, 1-16 September, 2009

Swine Flu Diagnostic Facility in Nepal

- **There is only one laboratory** doing diagnostic in Nepal that is National Public Health Laboratory (NPHL) which is located in Kathmandu.
- The Molecular test or the **Polymerase Chain Reaction (PCR)** is the only test available for the confirmation of the **virus**, but it is conducted only at NPHL in view of the high cost and lengthy process.
- Although now more than **35 districts and more than 40,000 people** have seen **flu** like outbreaks reported recorded.



Results

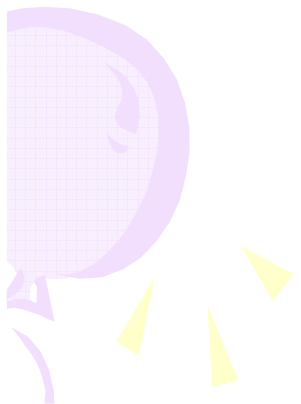
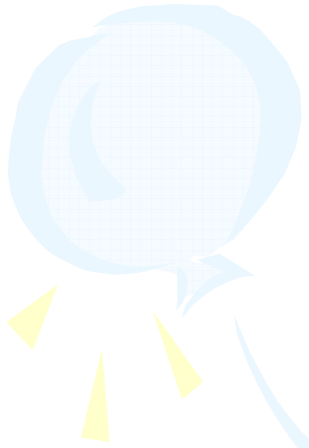


Table no. 1: Swine flu affected district of Nepal.

S. N.	Name of Districts	Total flu like cases reported	Laboratory confirmed cases	S. N.	Name of districts	Total flu like cases reported	Laboratory confirmed cases
1	Kathmandu	9500	42	12	Baglung	2500	2
2	Lalitpur	1000	2	13	Myagdi	1500	2
3	Bhaktapur	1000	1	14	Syangja	500	1
4	Kaski	4500	15	15	Argakhachi	200	2
5	Tanahu	3000	1	16	Surkhet	300	2
6	Chitwan	1500	2	17	Kailali	150	3
7	Dhanusha	1200	1	18	Kanchanpur	300	2
8	Rupandehi	500	2	19	Sunsari	300	0
9	Banke	600	3	20	Morang	550	0
10	Bardiya	1200	0	21	Jhapa	400	0
11	Parbat	3700	5	22	Doti	300	0
Total		27700	74	23	Dailekha	300	0
Grand Total		27700+7300	74+14	Total		7300	14
		=35000	88				

MAP OF NEPAL
ADMINISTRATIVE DIVISION
75 Districts, 14 Zones, 5 Regions

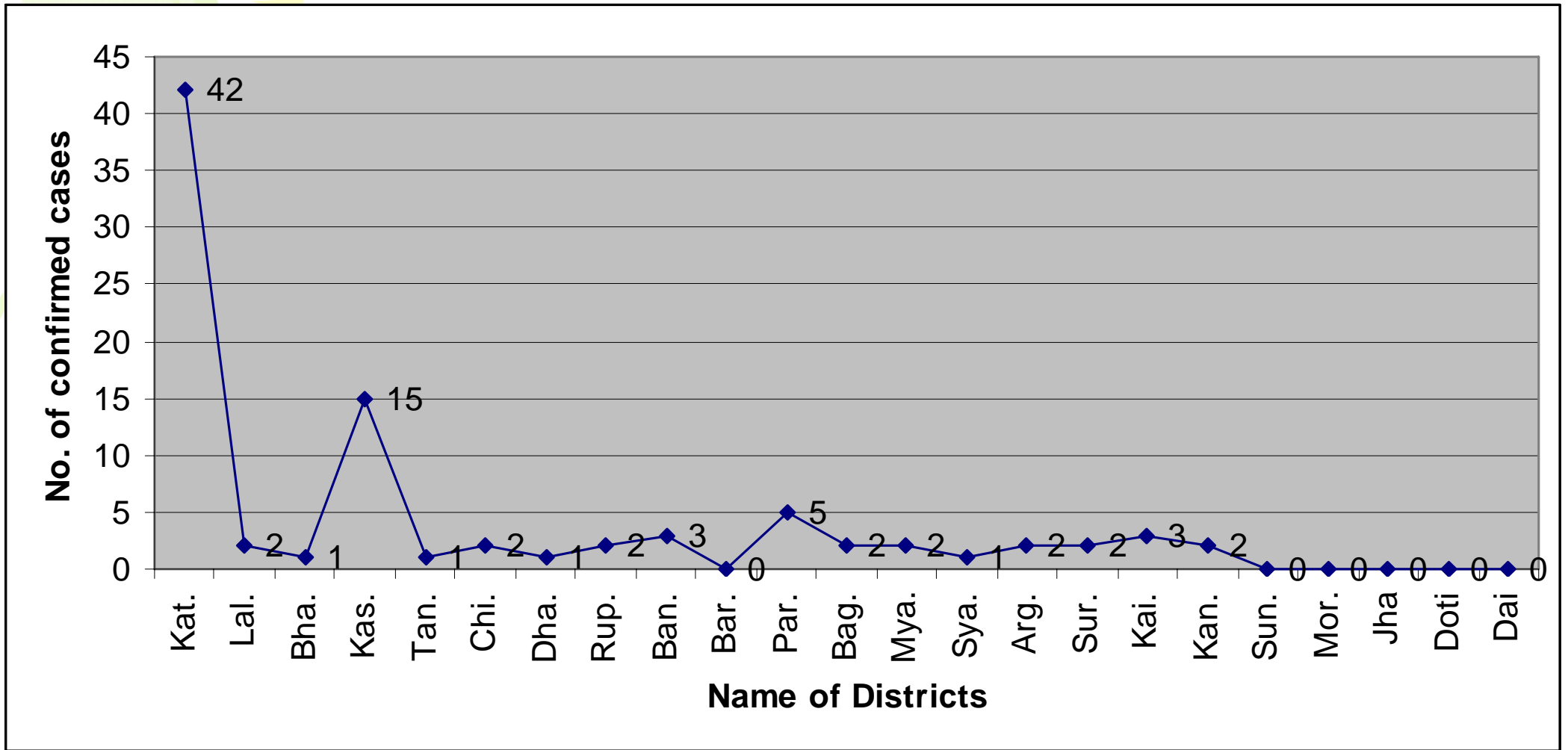
International Boundry	
Regional Boundry	
Zonal Boundry	
District Boundry	

KTM - Kathmandu
 B - Bhaktapur

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Swine flu confirmed cases in Nepal

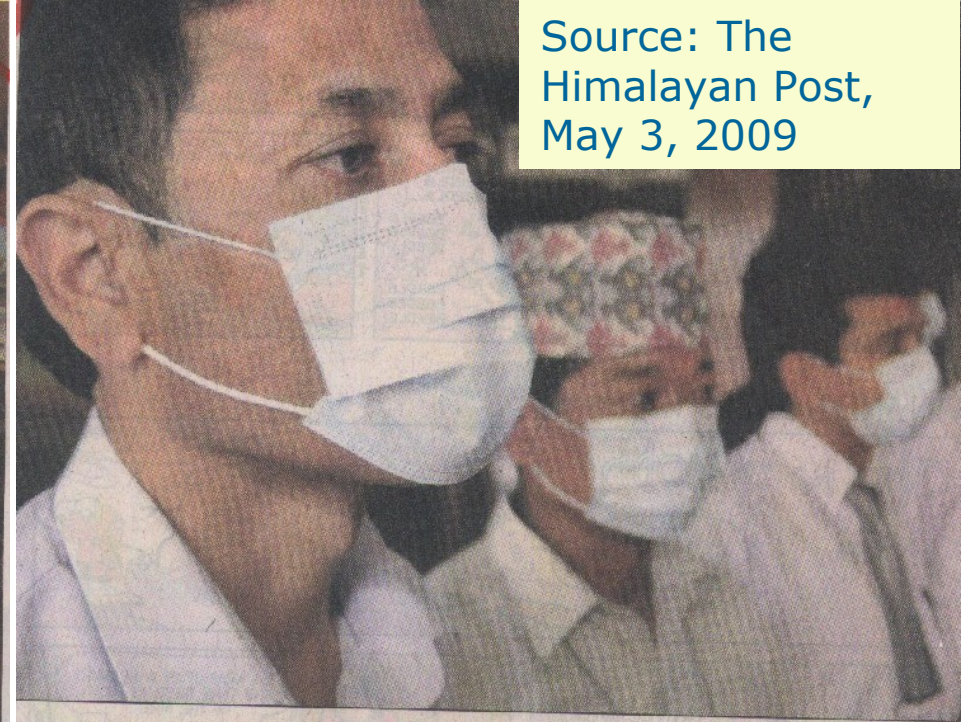


Graph no. 1: Laboratory confirmed human cases of swine flu in different districts of Nepal.

Source: The Himalayan Post, May 3, 2009



स्वाइनफ्लू सतर्कता | म्याग्दी सदरमुकाम बेनीमा स्वाइनफ्लूको हल्ला चलेपछि बचाउका लागि मास्क लगाएर कक्षामा अध्ययनरत विद्यार्थी । छिमेकी पर्वतमा य विरामी भेटिएपछि यहाँ पनि संक्रमणको आसंका बढेको हो ।
तस्विर : धनश्याम खड्का



Staffers of TIA wearing protective masks as a precaution against the swine flu at Tribhuvan International Airport in Kathmandu on Saturday.

Mass awareness programme is launched throughout the Nepal all professional, specially children are asked to wear mask.



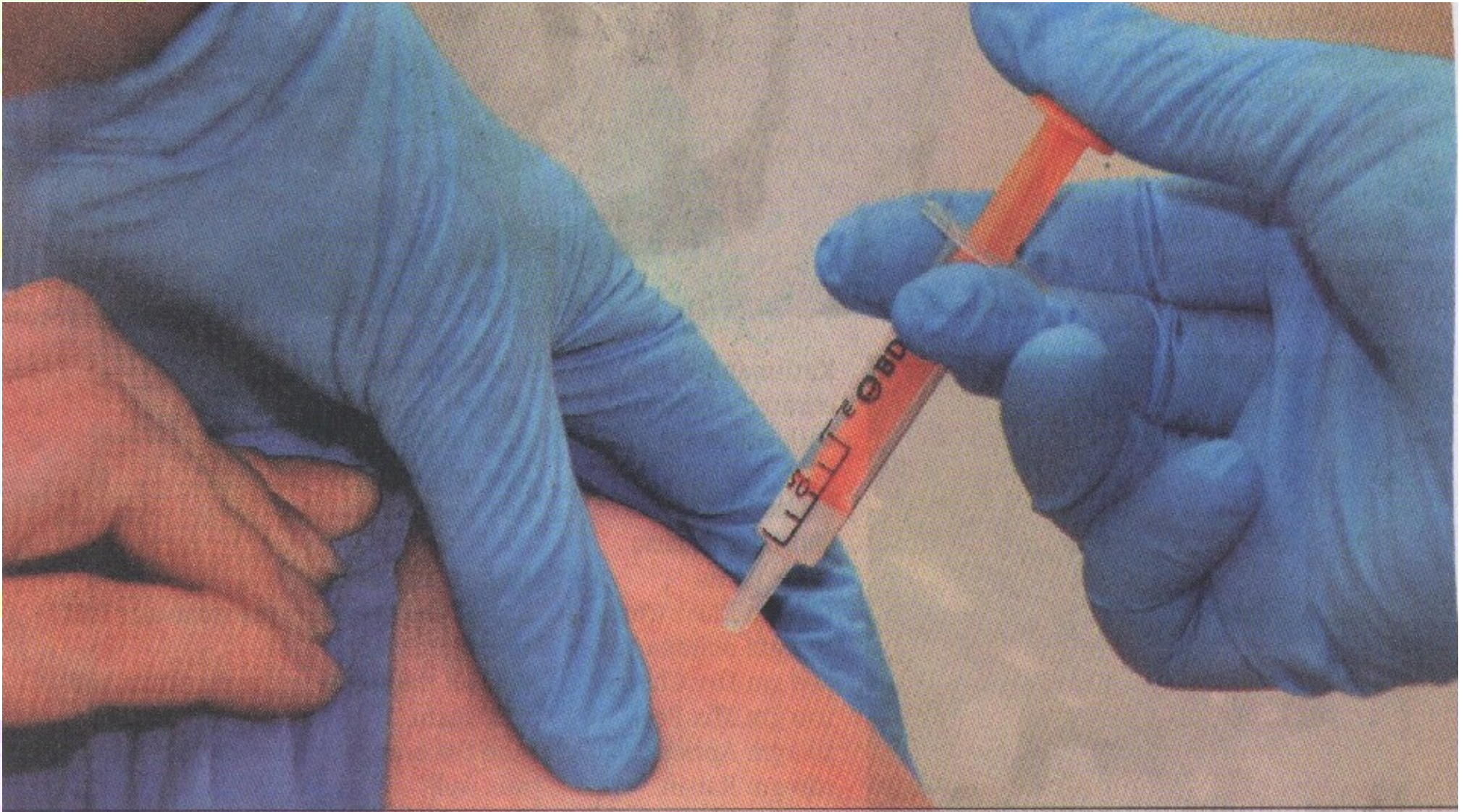
स्वाइनफ्लू सतर्कता | माक्स लगाएर अध्ययन गर्दै इमौलीस्थित गोरखकाली अंग्रेजी विद्यालयका विद्यार्थी । पर्वतमा स्वाइनफ्लू बेखिएपछि तनहुँका सरकारी तथा निजी विद्यालयहरूमा विद्यार्थीले माक्स लगाएर सतर्कता अपनाउन थालेका छन् ।
तस्विर : पूर्ण विक्रे / कान्तिपुर

Swine Flu AH1N1 Vaccine Production

WHO has said that the first batch of vaccines for AH1N1 is still a month away but even after the first batch is produced, countries need to wait for some more time to get the vaccine in sufficient volume.

Vaccine facts:

- First batch to be out in September/October
- Countries have to wait longer
- Single dose can treat patient
- Influenza vaccine that is inhaled being developed



The H1N1 (swine flu) vaccination being administered at the University College London hospital. A nationwide vaccination programme to counter the H1N1 virus kicked off on Wednesday, beginning with frontline health workers and those in at-risk groups.

REUTERS

Discussion

WHO has guided to the member countries about anti-swine flu drive for winter

Things to do to avoid Swine Flu

- Wash hands frequently
- Keep your distance (stay at least 1 meter away from others who are coughing or sneezing)
- Cough or sneezes with tissue, cloth, masks
- Separate sick people (keep them away from others)
- Use of protective masks for ill or high-risk group
- Avoid crowds


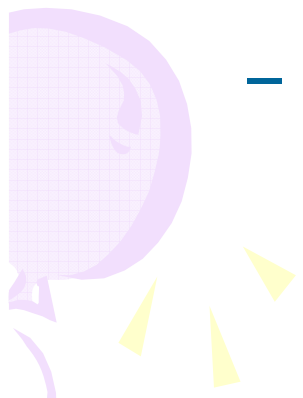
Criteria for hospitalization

- Signs of severe illness including
- Shortness of breath
- Difficulty breathing
- Weakness/inability to stand
- Unconsciousness
- Inability to drink fluids with dehydration
- High fever



Conclusion

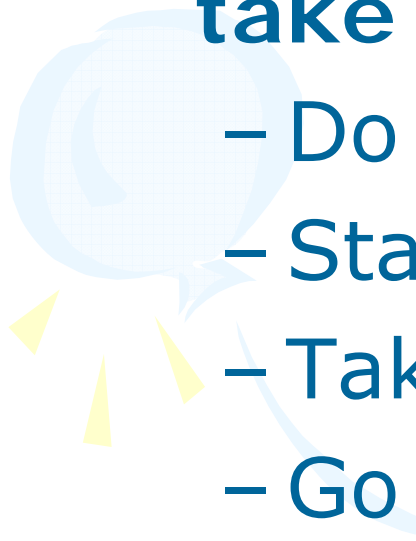

How to shield oneself from flu has been recommended by the government especially to the children

- 
- Always wash your hand
 - Use mask if you have to go near flu patients
 - Keep a meter's distance from the patients
 - Stay away from patients except in emergency
 - Avoid crowded
 - Cover your nose and mouth while sneezing
 - Avoid rubbing your hand on your eyes, nose and mouth
- 



Conclusion

How to check contagion one there is flu like symptoms occur in the locality take following precautions.

- 
- Do not go away from home
 - Stay in isolation
 - Take liquid diet
 - Go to hospital in severe cases
 - Wash hands and used hanky and clothes frequently
- 



H5N1 ALARM: Local residents vie for masks being distributed by a social organisation in Nepalgunj on Saturday. Swine flu panic gripping Indian cities has prompted Banke to sound a swine flu alert.

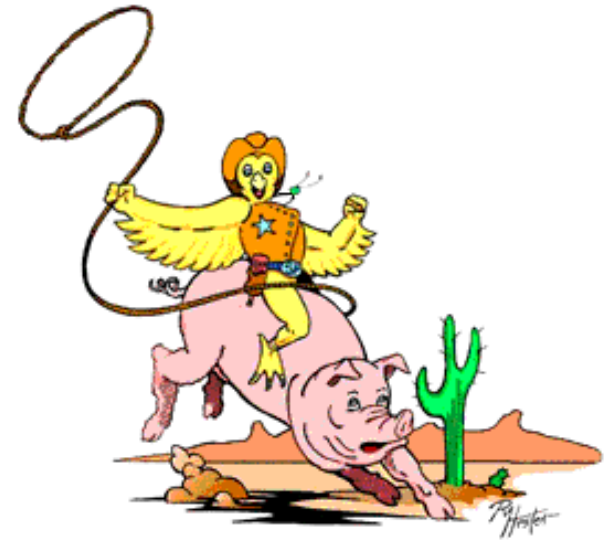
POST PHOTO/RAJENDRA NATH

Source: The Kathmandu Post August 16, 2009



Acknowledgement

- I would like to thank all the media, news paper like Kantipur, Kathmandu Post, Gorkhapatra, Rising Nepal, Himalayan Times, Nepal Weekly news paper and Himal half monthly news paper for publishing the news on swine flu.
- I am most thanks to all the staff of NZFHRC for their hard field work and help in report writing.
- I am grateful to DDJ Research Foundation, Chagal, Kathmandu, Nepal for the financial support.



**Thank You
Namaste**

