

# Pandemic H1N1 2009

Report of Regional Consultation on Pandemic H1N1 2009 and  
Strengthening Country Capacity for Pandemic Preparedness  
Bangkok, Thailand, 9-11 July 2009



**World Health  
Organization**  
Regional Office for South-East Asia



SEA-CD-193  
Distribution: General

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Printed in India

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## Acronyms

ASEAN	The Association of Southeast Asian Nations
AusAID	Australian Agency for International Development
CDC	Centers for Disease Control and Prevention,
IHR-2005	International Health Regulations, 2005
ILI	Influenza-like illness
NAIs	Neuraminidase Inhibitors
NICs	National Influenza Centres
NIPPP	National Influenza Pandemic Preparedness and Response Plan
OIE	OIE World Organization for Animal Health
PPE	Personal Protective Equipment
PHEIC	Public Health Emergency of International Concern
RCDLX	Rapid Containment Logistics Exercise
SARI	Severe Acute Respiratory Illness
SEAR	(WHO) South-East Asia Region
WHA	World Health Assembly
UNICEF	The United Nations Children's Fund
USAID	U.S. Agency for International Development



# 1. Background

Influenza is a fast spreading disease which can infect both humans and animals. For an influenza pandemic to occur, a new virus has to emerge, adapt to, infect and cause severe illness in humans; and acquire efficient and sustained human-to-human transmission among large susceptible populations. The emergence of influenza A (H1N1) 91 years ago led to a disastrous global pandemic in 1918-19. That virus is thought to have emerged almost simultaneously from birds into humans and swine<sup>1</sup>. Two other pandemics occurred in 1957-58 and 1968-69. Influenza viruses are dynamic and highly unpredictable.

In 1997, highly pathogenic avian influenza A (H5N1) crossed the species barrier causing severe illness and death in humans. Since, late 2003, more than 400 confirmed cases with high case fatality ratio have been reported. Currently, avian influenza A (H5N1) is deeply entrenched in bird populations in the South-East Asia Region and has expanded its host range. The emergence of H5N1 highlighted the critical need for influenza pandemic preparedness.

In March 2009 an outbreak of febrile respiratory infection was detected in Mexico. In April 2009, cases were also reported in the USA and a novel subtype of influenza virus A (H1N1) was identified<sup>2</sup>. Following this report, on 24 April 2009, WHO declared the outbreak as a Public Health Emergency of International Concern (PHEIC). Based on the recommendation of the Emergency committee, the Director-General of WHO raised the pandemic level to phases 4, 5 and subsequently to 6. In just a nine-week period, the outbreak has been reported from all WHO Regions. As on 6 July, 94 512 cases with 429 deaths have been officially reported from 135 countries and territories, including from six countries of the WHO South-East Asia Region<sup>3,4</sup>. After the declaration of Phase 6 of the

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<sup>1</sup> Morens DM, Taubenberger JK, and Fauci AS, The Persistent Legacy of the 1918 Influenza Virus. *N Engl J Med* 2009; 361:225-29

<sup>2</sup> WHO. *Emergence of a novel swine-origin influenza A (H1N1) virus in humans*. *N Engl J Med* 2009; 360:2605-15

<sup>3</sup> Latest updates on the global situation are available online at <http://www.who.int/csr>

<sup>4</sup> Updates on the situation in SEA countries is available online at [www.searo.who.int](http://www.searo.who.int)

pandemic influenza A (H1N1) 2009 on 11 June 2009, public health actions have moved towards mitigation from the previous efforts at containment.

Recorded pandemics have manifested themselves in waves, usually mild at first and more severe during the second waves. How the subsequent waves of the current pandemic pan out cannot be correctly predicted at this moment. Lessons from pandemics show that restriction of international travel or closure of borders could possibly delay but not stop spread. Moreover, influenza pandemics tend to cause severe disease in young adults but also cause excess mortality at the extremes of age and in persons with underlying illnesses. Health systems in most Member countries get overstretched and provision of adequate medical and hospital care poses a great challenge. The exact human and socioeconomic toll of pandemics is difficult to predict, but past experiences show that they cause severe impact in a short-span of time. However, their estimated human and economic costs are influenced by several factors and have not been uniform as can be seen from table 1 below.

**Table 1:** Characteristics of the three pandemics of the 20<sup>th</sup> century

Pandemic	Area of emergence	Subtype	Estimated reproductive No.	Estimated CFR	Estimated mortality change	Most affected age group	GDP loss %
1918-1919 Spanish Flu	Unclear	H1N1	1.5-1.8	2-3%	20-50 mill	Young adults	-16.9 to 2.4
1957-1958 Asian Flu	South China	H2N2	1.5	<0.2%	1-4 million	Children	-3.5 to 0.4
1968-1969 Hong Kong Flu	South China	H3N2	1.3-1.6	<0.2%	1-4 million	All ages	-0.4 to 01.5

Bearing these pandemic-related issues in mind, the Health Ministers of 11 Member countries of WHO South-East Asia Region (SEAR), met on 19 May 2009 in Geneva during the 62nd session of the World Health Assembly (WHA) and expressed their solidarity and resolved for concerted policy actions to minimize the impact from the pandemic. They identified that access to diagnostics, antiviral medicines and vaccines as major challenges. The Ministers expressed their collective commitment to ensure regional solidarity and resolved to foster collaboration. At this meeting, the Ministers of Health requested the WHO Regional Director for South-East Asia to convene a regional meeting of experts for a technical consultation in

order to pursue and accelerate actions to enhance capacity to respond to the pandemic.

This regional consultation on Pandemic Influenza A (H1N1) 09 was organized in response to this request. The consultation was held from 9 to 11 July 2009 in Bangkok, Thailand with participation of experts from Member countries and partner organizations.

## **2. Objectives**

The overall objectives of the meeting were to minimize the impact from the pandemic in the Region. The specific objectives of this meeting were:

- (1) To review the Pandemic (H1N1) 2009 situation and the current level of preparedness;
- (2) To discuss how to move forward with a regional strategy, with specific reference to enhancing influenza surveillance; building laboratory capacity; stockpiling of essential supplies; revising laws and regulations to permit use of new medicines and vaccines; and building collaborative partnerships for research and production of vaccine and essential medicines; and
- (3) To make recommendations on follow-up actions at country level and by WHO, as appropriate.

## **3. Opening Session**

Dr Jai P. Narain, Director, Department of Communicable Diseases, WHO Regional Office for South-East Asia, gave a brief introduction and background of the technical consultation. He then invited H.E. Mr Withaya Kaewparadai, Minister of Public Health, Royal Thai Government to deliver his address and inaugurate the meeting.

H.E. Mr Withaya Kaewparadai welcomed the participants and thanked WHO-SEARO for organizing the meeting in Thailand which has reported the highest number of cases of influenza H1N1 2009 in the Region to date. Underscoring the need to dispel public panic from misperceptions of this disease, the Minister called for improving public communication. He called for strengthening regional solidarity including

local production of pandemic vaccine. In this regard, the Minister said that Thailand has finalized preparations for production of pandemic flu vaccine with technical support from the WHO. The Minister stated that “Thailand would be more than happy to share some of our pandemic flu vaccines with other Member States based on our commitment with WHO”. Before concluding his address and declaring the meeting open, the Minister reiterated the commitment of the Royal Thai Government to work in collaboration with WHO and all Member States in strengthening regional capacity for preparedness and mitigation (refer to Annex 1 for full text of the speech).

Dr Samlee Plianbangchang, WHO Regional Director for South-East Asia, welcomed all participants and expressed his appreciation to the Ministry of Public Health, the Royal Thai Government for co-hosting and making preparation for the consultation. He thanked the Minister of Public Health for inaugurating the meeting.

The Regional Director recalled that the WHO Director-General had declared the world’s first-ever Public Health Emergency of International Concern in accordance with the provisions in the IHR (2005). Noting that the majority of cases to date are mild to moderate, he cautioned against complacency as no one could say how this pandemic would eventually unravel. Dr Samlee noted that “in the midst of this scientific uncertainty, it is incumbent upon us to be well prepared, and be prudent in providing advice to the public”.

He noted that this regional consultation had been organized in pursuance to the request made by the Health Ministers of the Region and wished the consultation all success in its deliberations (refer to Annex 2 for full text of the speech).

## **4. Plenary sessions**

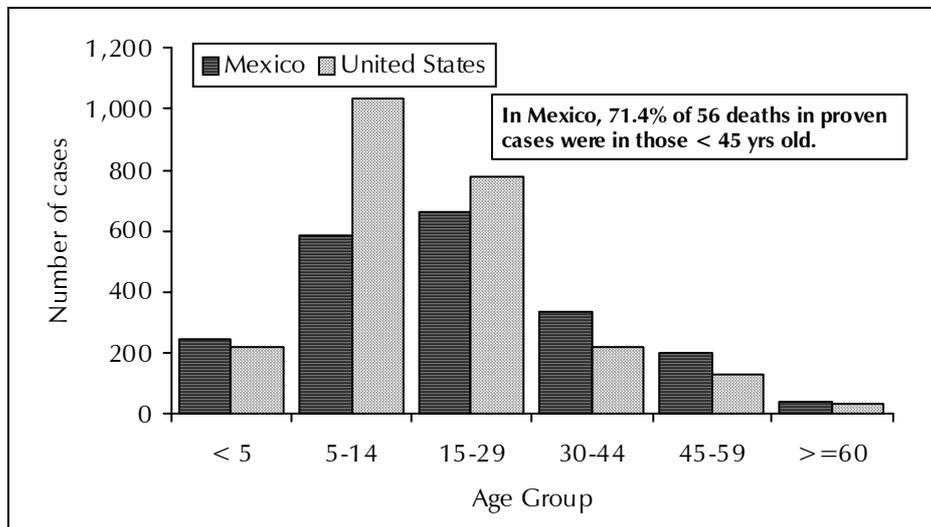
Following the inauguration, presentations were made by various experts and staff of WHO. These included global and regional updates, response to pandemic, experiences and lessons and proposed strategies to strengthen country capacity.

### 4.1. Global overview of pandemic H1N1 2009

Observations from previous pandemics showed that it took as much as six months for influenza pandemics to spread wide. In contrast, the current pandemic spread in all the six WHO Regions just in nine weeks. As of 6 July 2009, nearly 95 000 cases and 429 deaths were reported from 135 countries. This demonstrates the pace of spread of infectious diseases with growing international travel and trade. Further spread within and to new countries seems inevitable. As soon as the new virus was confirmed, WHO assessed the risk and in consultation with the Emergency Committee declared it a public health event of international concern. Following further spread of the disease, the WHO Director-General declared the pandemic as Phase 6 on 11 June 2009.

Pandemic H1N1 2009 is remarkable for its efficient and rapid person-to-person transmission. In contrast to seasonal influenza, it continues to circulate outside the usual influenza season and affects different age groups, sparing older adults (> 60 yrs) and severe disease and fatalities in previously healthy young adults and children. The most commonly affected age group is 5-45 years. Infections were also documented in healthcare workers (Figure1).

Figure 1: Age distribution of confirmed pandemic H1N1 2009 cases in Mexico and United States



Source: WHO. WER 15 May 2009

It was observed from the current pandemic that there is potential for explosive outbreaks in semi-closed communities of susceptible population. Furthermore, older adults showed epidemiologic and serologic evidence for low susceptibility. However, there were variations among countries regarding underlying risk factors for disease severity. For example, 60% of hospitalized patients in Mexico had no recognized co-morbidities, while 54% of 22 patients hospitalized in the US had risk conditions. The average duration of hospitalization was observed to be 5 to 7 days. Approximately 17% of hospitalized cases required some form of mechanical ventilation. The pandemic H1N1 2009 viruses are currently susceptible to the neuraminidase inhibitors (NAIs) Oseltamivir and Zanamivir. While there is growing global capacity for vaccine production, there is gap between potential demand and anticipated supply and a vaccine is likely to be available in August/September 2009.

## **4.2. Regional overview of pandemic H1N1 2009**

As on 9 July 2009, a total of 2657 confirmed cases and 10 deaths were officially reported from the WHO South-East Asia Region. The countries that have confirmed cases include Bangladesh, India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand. Community-level sustained transmission, including clusters of cases in schools, was confirmed in Thailand. Cases from the other six affected countries were related to international travel and their contacts but a sustained transmission has not yet been observed. Deaths related to pandemic H1N1 2009, so far, were reported from Thailand only.

In response to the pandemic, Member countries and WHO/SEARO have scaled-up public health measures to delay further spread and to mitigate possible impacts. Such measures include enhanced surveillance, strengthening laboratory capacity, and risk communication. The WHO Regional Office has also improved stockpiling and distribution of Oseltamivir and essential supplies.

Experience to date underscores the importance of activating the National Influenza Pandemic Preparedness and Response Plan (NIPPP), intensifying surveillance and rapid surge capacity for laboratory and case management. Mexico's experience has shown that travel restrictions could be disruptive and create public panic. Mass media campaign to alert the

public on modes of transmission, to promote respiratory hygiene, hand washing and social distancing measures were crucial. It is important to periodically assess the risk and adapt public health measures accordingly.

### **4.3 Implementation of influenza preparedness plan**

The current situation of the pandemic in SEA countries of the Region ranged from those with none to few cases to those with sustained community outbreaks. Under IHR (2005), WHO is mandated to perform public health surveillance, support States and coordinate international response to PHEIC.

Pandemic surveillance consists of three parts: early detection and investigation, comprehensive assessment, and pandemic monitoring. Early detection and investigation entails case detection and confirmation of the diagnosis followed by reporting to WHO. The objectives of comprehensive assessment are (i) to provide an accurate description of the epidemiological, clinical and virological characteristics of the pandemic in the country to facilitate a more effective response, and (ii) to provide information for making decisions about: mitigation strategies, case management and treatment decisions.

According to the latest guidelines, Member States are no longer required to daily report daily cases to the World Health Organization. However, they are required to monitor the pandemic. The objectives of monitoring the pandemic are to (i) track the geographic spread of disease and the level of its activity, (ii) assess the modes of transmission, (iii) assess severity of disease, (iv) track the impact of the pandemic on the health care infrastructure, (v) monitor the trends and (vi) monitor changes in the antigenicity and antiviral sensitivity of the virus. Sources of data for monitoring include weekly outpatient data, hospital data, ILI surveillance, telephone surveys, reports on absenteeism from schools and work places, and existing surveillance to monitor maternal mortality, pneumonia in under-5 children, etc.

### **4.4. Stockpiling of antivirals**

WHO has mobilized and strategically pre-positioned antiviral stockpiles of 5 million blisters/courses of Oseltamivir (75mg). This includes two million

courses in the six WHO regions (AFR, AMR, EMR, EUR, SEAR, and WPR) and three million courses in Roche's warehouse in Switzerland (deployable in 24 hours). Furthermore, essential supplies including PPE, sample collection kit, transport for specimen collection were positioned in other WHO stockpiles, UN Humanitarian Response Depots and in countries. To ensure timely deployment of these supplies, a Rapid Containment Logistics Exercise (RCDLX) was organized for staff involved in field operations. Likewise, field simulation and rapid containment exercises were organized in countries. A pandemic logistics learning exercise had been conducted with WFP, Malaysia.

Since April 2009, WHO has distributed 622 733 courses of Oseltamivir to eight countries in the SEA Region. At present, the WHO/SEARO regional stockpile of Oseltamivir consists of 359 422 courses; 147 404 courses in New Delhi and 212 018 courses in Bangkok.

Challenges in managing the stockpiling of antivirals include determining appropriate deployment strategies in varying scenarios/geographic spread, coordination, transport and storage. Other challenges include ensuring reliable estimation of needs and making sure that procedures for mobilization of stockpiles are implemented and regularly updated. Managing the shelf-life and expiry of drugs also has been a challenge.

#### **4.5. Laboratory capacities**

One of the prerequisites for an efficient health sector response to a pandemic is the availability of reliable public health laboratory capacity. The laboratory plays a key role in confirming the diagnosis, surveillance, molecular and epidemiological characterization, drug susceptibility, virulence studies, and assessment of immune response. Likewise, the laboratory services are critical in research and in development of drugs and vaccines, as well as sharing of information and material with global network. In this regard, the Global Influenza Surveillance Network has vital functions in virological surveillance, shipping specimens, reconfirmation of the diagnosis and further testing for molecular characterization, making reagents, recommending strains for vaccine production, and vaccine production and testing. National Influenza Centres (NICs), which are part of the Global Network, are currently functioning in seven countries of the

Region. Four countries (Bhutan, Maldives, Nepal and Timor-Leste) are yet to establish their own NICs.

As a response to the pandemic, contingency planning for laboratories has included ensuring availability of premises, staff and equipment; stockpiling supplies; developing protocols, algorithms and strategies; maintaining bio-safety in laboratories; quality assurance and control, data management and communication. WHO has provided support including technical guidelines, facilitating the supplying of reagents (WHO collaborating centres and H5 Reference labs); training (Bangkok: June 9-12), and networking (global and regional), in establishing laboratories, in External Quality Assessment Scheme, and information sharing.

Issues regarding laboratories that need emphasis include establishment and expansion of networks, building surge capacity, ensuring supply of reagents, quality assurance, bio-safety and bio-security, rational use of laboratory services, development of testing policies and guidelines, and networking for shipping the specimens. Furthermore, there is a need to improve communicating with public health workers and clinical users of laboratory results, monitoring of resistance to antiviral drugs, and last, but not the least, strengthening regional solidarity.

#### **4.6. Strategy and initiatives for pandemic preparedness and response**

The proposed strategy for strengthening national capacity for pandemic preparedness builds upon NIPPs which largely are developed based on lessons and experiences from the outbreak of avian influenza (H5N1). While key interventions are also applicable to the current pandemic, it is necessary to adapt actions based on epidemiological, clinical and virological observations and lessons to date from pandemic H1N1 2009. The proposed strategy underscores the need for consideration of national and local contexts in adapting interventions. The strategy aims to promote a unified approach in implementation of interventions in the Region. Its objectives include delaying the geographic spread of the disease, minimizing the health and socio-economic impact of the pandemic, and to enhance inter-country cooperation including sharing of expertise and information.

Key elements of the proposed strategy include i) intensifying surveillance and laboratory capacity; ii) improving case management and infection control; iii) scaling-up public health measures (non-pharmaceutical interventions); iv) risk communication, v) pharmaceutical interventions; and vi) strengthening logistics in response to the pandemic. Key activities in each element were presented and discussed at group and plenary sessions. Details of suggested activities and identified actions are included in the proposed strategy document and in the conclusion and recommendation.

Following the declaration of PHEIC, WHO/SEARO initiated several actions aimed at delaying the spread and mitigating the impact of the pandemic. The Regional IHR Task Force was activated with the establishment of four sub-groups; namely i) Surveillance and laboratory; ii) Logistics and management; iii) Communication and health education; and iv) Medical and health services. Strategic Health Operations Center was activated with regular communication to all IHR focal points. Regular situation updates were provided. Communication has been enhanced through media briefs, development of public messages and web-updates. Technical consultations are being organized. Laboratory support, including training was also provided. Likewise, support was provided to improve strategic stockpiling and distribution of Oseltamivir and supplies. National-level rapid assessment on the status of preparedness was undertaken. Furthermore, technical guidelines and tools were adapted and shared with member countries. WHO continues to work closely with all Member countries to strengthen national capacity for pandemic response. This regional consultation, organized pursuant to the request of Member countries, is an important initiative aimed at developing a unified framework for preparedness and response.

#### **4.7. Action plan for availability and accessibility of vaccine and antivirals**

Currently, a vaccine to prevent pandemic influenza H1N1 2009 is not available. However, there is progress in the development of a pandemic vaccine. For example, Novartis, Sanofi Aventis and Glaxo Smith Kline are being supported financially by the US government for development, pilot production and for the initial clinical studies to test the safety and efficacy of the vaccine and the need for an adjuvant. Most of the current capacity is located in Europe or North America and is not adequate to meet the need

of the global pandemic. Access to an effective pandemic vaccine is a major problem in the South-East Asia Region. Presently, only three countries in the Region – India, Indonesia and Thailand have the potential capacity for production of pandemic influenza vaccine at the pilot plant scale. The World Health Organization has already provided contracts to three vaccine manufacturers to develop a vaccine against pandemic H1N1 2009, one in each of these three countries. There are manufacturers in the Region that could, within four to six months, produce pandemic H1N1 2009 vaccine in quantities of 100 million doses a month. The manufacturers immediate needs were: supply of the seed viruses by WHO; supply of quality assurance reagents and a commitment from the authorities to buy the vaccine. However, it will take some months before a pandemic vaccine is available and there is a need to expedite this process including fostering inter-country collaboration in transfer of technology within the South-East Asia Region.

**Table 2:** *Estimated Timeline of pandemic H1N1 2009 Vaccine Production*

	<b>Description/ development</b>	<b>Timeline-weeks</b>
1	Receipt of strain	Day 0
2	Adaptation of virus to vero cells	0-3
3	Development and characterization of MVB, WVB	3-6
4	Manufacturing process development	6-12
5	Animal efficacy studies and preclinical toxicity studies	12-15
6	Vaccine candidate ready for clinical trial and IND submission.	15
7	Clinical trials to evaluate safety and immunogenicity	15-18
8	Candidate vaccine ready for commercial use	18

As for the antiviral drug, Oseltamivir, there is expertise and experience of manufacturing the drug in four countries of the Region: Bangladesh, India, Indonesia and Thailand. The major bottleneck in the manufacture of

Oseltamivir is the availability of shikimic acid in adequate amounts. The compound is extracted from the Chinese plant, star anise, that is grown only in certain parts of China and Viet Nam. The yield from the synthetic/semi-synthetic process has been low and not viable from the viewpoint of production. Exemption from customs and excise duties for shikimic acid, intermediate compounds alongwith Oseltamivir API importation are some of the options to expedite the local production of Oseltamivir. Another probability is to search for an alternative source star anise in countries in the Region along with research attempting to obtain shikimic acid from non-star anise origin. Some key strategic elements to ensure adequate availability and stockpiling of Oseltamivir include reliable quantification of the immediate needs; available quantity; mode of maintaining a stockpile in each country; and ensuring uniform price of the drug by prior negotiation; prior planning for distribution to each country and within countries. Likewise, harmonization of regulatory procedures between countries; ensuring rational use of the drug through training programmes should be pursued. Production of Zanamivir as an alternative antiviral agent for those cases with infection by resistant strains of the pandemic virus also needs to be considered at this stage.

It is crucial to work closely with the private sector for increased production of vaccines and antivirals.

## **5. Group discussions**

Working groups deliberated on how to strengthen key elements of the pandemic preparedness and response strategy. These include surveillance and laboratory, public health measures (non-pharmaceutical interventions), pharmaceutical interventions (vaccines and antiviral production), risk communication; and logistics (procedures for sharing and rapid mobilization of supplies).

Intensifying surveillance and enhancing laboratory capacity are critical to detect and confirm, and to monitor the pandemic. The group emphasized the need for using standard case definitions for influenza-like illness (ILI) and for severe acute respiratory illness (SARI). Monitoring of disease trend to detect clusters among healthcare workers, tourists, and school students was identified as a key activity. Furthermore, epidemiological, clinical and virological assessment of clusters; and testing

for antigenicity and antiviral sensitivity during the early stages of community transmission are necessary. Similarly, the group underscored the need for monitoring of geographic spread, viral activity, disease severity, and the impact on healthcare services.

Public health measures (non-pharmaceutical interventions) delay spread of the pandemic, thus helping to buy time for building surge capacity and to strengthen other mitigation measures. This would help reduce any sudden burden on hospital services which otherwise could be overwhelmed, especially in resource-limited areas and where vaccine and antivirals are either in short supply or not available. Thus, public health measures such as social distancing, and personal and environmental hygiene need to be reinforced. Social distancing measures such as self-isolation, not holding classes, suspending non-essential travel, avoidance of mass gatherings, and triaging for case management need to be judiciously implemented based on assessed risk and in the context of the evolving situation. Personal and environmental hygiene practices including respiratory etiquette, hand washing, use of personal protective equipment by health care workers and caregivers, and environmental cleaning are key public health measures. Other measures include discouraging unnecessary hospital visits, relaxing regulations on sick leave, and discouraging sick people from traveling. However, decision makers need to consider the merits and demerits of each intervention and its timing before applying it in the community. Developing suitable communication strategies, public perceptions and acceptability of interventions and reaching the hard-to-reach population may pose a challenge in implementation.

Pharmaceutical interventions including use of antivirals, vaccine, and critical care supplies are vital to effectively respond to and mitigate the impact of the pandemic. It is important to set mechanisms for prioritization of vaccine and antiviral distribution; and to strengthen regional capacity for vaccine and antiviral production. Currently, four countries in the Region (Bangladesh, India, Indonesia and Thailand) have capacity to produce 8 million packs of Oseltamivir in a month which can be scaled-up to 16 million packs during an emergency. It also maintains a ready stock of 1 million packs, which can be airlifted within 24-48 hrs to any destination in the South-East Asia Region. During a pandemic, arrangements were in place to dedicate two more manufacturing facilities for increasing Oseltamivir production to 32 million packs a month. Three Member countries (India, Indonesia and Thailand) have the potential capacity to produce influenza pandemic vaccine. The plant project in Thailand, which

will start production in August, has a capacity to produce up to 600 000 doses/week (2.4million doses/month). When the Industrial Plant Project for Pandemic Influenza Vaccine with a capacity of 60 million doses per situation period is fully functional, Thailand has pledged 10% of its annual production for WHO. In view of these developments it is important to enhance efforts including funding support, and facilitating prequalification, and quality monitoring.

## **6. Acknowledgements**

The regional consultative meeting was organized in collaboration with the Ministry of Public Health, the Royal Thai Government. Participants from Member States and partner organizations including AusAID, ASEAN, CDC, OIE, UNICEF, USAID, The World Bank and FAO provided invaluable inputs to the success of the meeting. The meeting was funded by CDC. The contribution of all the participants and the WHO organizers is acknowledged.

**Annex 1**

**Address of H.E. Mr Withaya Kaewparadai,  
the Thai Minister of Public Health,  
Royal Thai Government  
at the opening of the WHO/SEAR Regional Meeting  
on the Pandemic of H1N1 Influenza Virus  
9 July 2009, Bangkok, Thailand**

The World Health Organization Regional Director for South East Asia, Dr. Samlee Plianbangchang, distinguished delegates, ladies and gentlemen,

First of all, I would like to sincerely appreciate and commend the leadership of the Regional Director and his senior staff at of WHO/SEARO for their decision to convene this timely regional meeting on the pandemic of H1N1 Influenza virus, in the hardest hit country of the Region, Thailand.

Distinguished delegates, ladies and gentlemen,

At the moment, the H1N1 flu virus affects seven out of 11 SEAR Member countries. The hardest hit, is of course, Thailand, with almost 3000 confirmed cases and seven deaths. Although this may not appear serious in terms of morbidity and mortality, it has created a huge socio-economic impact. We clearly envisage public panic from misperceptions of this disease and a decline in tourism and trade. These result from inadequate communication policies. I would therefore like to suggest that the regional work plan, which will be developed at this meeting, should also include a section on public communication. The World Health Organization has an important role to play in this regard, particularly with its mandate to provide technical support to ministries of health of countries to ensure transparency and effectiveness of public communication. This will help build public confidence and reduce the socio-economic impact which may sometimes have a greater effect than the impact on morbidity and mortality.

Distinguished delegates, ladies and gentlemen,

We need to work collectively to be better prepared for the possibility of a more severe pandemic in the coming winter. One of our key strategies is to

develop local flu vaccine production capacity. Thanks to the support of the World Health Organization, at least three countries in the Region may soon have the capacity to produce the pandemic flu vaccines. These are India, Indonesia and Thailand. I learnt that on Saturday 11 July , you all will visit our pilot plant. This plant was successfully established based on the strong technical support from the World Health Organization. I really hope that we can collectively develop our capacity to produce effective, high quality pandemic flu vaccines in sufficient quantity, in time for the pandemic. Thailand would be more than happy to share some of our pandemic flu vaccines with other Member States based on our commitment with WHO.

Once again, I extend my sincere thanks to the World Health Organization, especially SEARO, in convening this meeting and in supporting our effective preparedness plan, including the flu vaccine pilot plant.

I now declare the meeting open and wish you all a very successful meeting.

Thank you so much.

## **Annex 2**

### **Opening Remarks by Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia**

Excellency Witthaya Kaewparadai, Minister of Public Health, the Royal Thai Government, Distinguished participants, Honorable guests,

Ladies and Gentlemen:

I am pleased to welcome you all to the Regional Consultation on Pandemic H1N1 2009: Strengthening Country Capacity for Pandemic Preparedness.

I also convey greetings and best wishes from the World Health Organization to all at this august gathering.

First and foremost, I would like to thank the Ministry of Public Health, the Royal Thai Government, for agreeing to co-host the consultation. I gratefully thank H.E. Mr Witthaya Kaewparadai, Minister of Public Health, for agreeing to inaugurate the meeting.

I thank concerned experts of the Ministry of Public Health for their valuable inputs to the preparation of the agenda and programme for the Consultation.

Ladies and gentlemen,

The outbreaks of pandemic H1N1 2009 started in the western hemisphere, and spread rapidly to other parts of the world. In responding to the threat of these outbreaks, on 25th April 2009, the Director-General of WHO declared the world's first ever Public Health Emergency of International Concern. This was done in accordance with the provisions in the International Health Regulations 2005. Today, 108 countries worldwide have reported 59,814 confirmed cases with 263 deaths. We are now in phase 6 of influenza pandemic alert, It is the maximum phase. However, this H1N1 influenza virus still causes mainly mild illness. And we hope that cases of this H1N1 influenza will continue to be mild.

Unlike seasonal influenza, only less than 1% of pandemic H1N1 2009 viral infections with clinical symptoms occur in the old people. Cases of pandemic

H1N1 2009, which are severe or fatal, are confined largely to people with underlying chronic illnesses. Also, pregnant women and young children appear to be at a higher risk for a more severe form of infection by pandemic H1N1 2009. What is our main concern with the pandemic H1N1 2009 is its “re-assortment”. If it co-infects people with seasonal influenza, there may be a genetic combination of the two viruses; resulting in a new virus. And which can turn out to be more virulent and severe.

Now, it is time for seasonal influenza, we should also be well aware of this phenomenon; and we should also protect ourselves well from becoming infected with the seasonal influenza virus. Furthermore, the AI (H5N1) virus, which has been prevailing in our countries, can complicate the situation. Reassortment may also take place due to coinfection of pandemic H1N1 2009 and H5N1 viruses. We have therefore to make sure that the endemic AI H5N1 in our countries is put under proper control.

Influenza viruses, in general, are highly unstable and easily to undergo genetic mutation, the phenomenon that can turn them to be in a milder or in a more severe form. In this regard, the pandemic H1N1 2009 is no exception. This is something that we have to keep in mind when dealing with influenza viruses.

Ladies and gentlemen,

Past experience reminds us that the initial situation of influenza pandemics can change. Historically, each influenza pandemic encircled the globe 2-3 times, over two to three years.

The deadly influenza pandemic came in 1918 in the mild form first; then turned out to be a far more deadly one. The 1957 influenza pandemic began with a mild phase, followed by the second wave of a higher fatality. The influenza pandemic in 1968 remained mild in both its first and second waves.

Indeed, the influenza viruses are unpredictable. No one can say how the current pandemic H1N1 2009 will evolve. Therefore, in the midst of this scientific uncertainty, it is incumbent upon us: to be well prepared, and to be prudent in providing advice to the public.

Our experiences in dealing with AI (H5N1) outbreaks should be the starting point;

And the basis for the development of interventions against pandemic H1N1 2009. Our Influenza Pandemic Preparedness Plans must be strengthened, and vigorous actions taken to implement them. We have the International Health Regulations (2005) to be the global tools. The tools for all countries to work coordinatedly in worldwide solidarity to fight this scourge.

With today's advancement in medical sciences and technology we should be able to do better in our influenza pandemic preparedness and response. With their serious concern with the situation, the Honourable Ministers of Health from SEAR got together in Geneva during the 62<sup>nd</sup> World Health Assembly and unanimously called for unified actions to minimize the impact of the influenza pandemic H1N1 2009.

In this connection, the Ministers requested the Regional Director of WHO South-East Asia to convene a regional consultation to identify cooperative strategies for coordinated actions in the Region. This consultation, which is in pursuance to that request, will critically review influenza pandemic preparedness and response in South-East Asia.

The Consultation will deliberate particularly upon the issues relating to intensifying actions on the surveillance of ILI and SARI; building capacity of National Influenza Centers; networking of these centers with other labs within and between Regions; and regional production of antivirals, vaccines, and other necessary supplies;

The discussions will also touch on the issues concerning: licensing, access; and building public - private partnerships. The consultation will also deliberate upon other related matters.

Distinguished participants,

This influenza pandemic opens several opportunities in public health: The opportunity to test our influenza pandemic preparedness plans, and our capacity to implement them; the opportunity to assess our core country capacity to participate effectively in implementing IHR (2005), and very importantly, the opportunity for Member States to assess the weaknesses of IHR (2005), which came into force in June 2007.

We do not know exactly how long this influenza pandemic will last. And we cannot estimate the exact magnitude of the impact of the pandemic on the world population in health, social and economic terms. However, we can expect to gain

a lot of lessons that can be learned from the pandemic. The lessons that will be very useful to all of us in our efforts to strengthen country capability and capacity in influenza pandemic preparedness and response and the lessons that will be very useful for Member States to re-examine and further strengthen IHR (2005). For now, let us focus on strengthening the existing systems and building effective linkages in order to ensure a consistently coordinated approach within and among countries in dealing with the pandemic.

Let me thank all Member States and all partners for their unstinted cooperation, the cooperation that enables WHO to maintain the required vigilance as we gear-up our response.

I thank all participants from countries, UN and other partner agencies, civil society organizations, the pharmaceutical industry, laboratories and others for sparing their valuable time to attend the consultation.

With these words, ladies and gentlemen, I wish the consultation all the best and all success in its deliberations.

Thank you.

## Annex 3

# Programme

### Day 1- Thursday, 09 July 2009

08:30- 09:00	Registration
09:00-09:30	<p><b>Opening session</b></p> <p>Welcome address: by Hon'ble Minister of Health, Royal Thai Govt</p> <p>Opening Remarks: by Dr Samlee Plianbangchang, Regional Director, WHO/SEARO</p> <p>Objectives and Introduction of Participants: by Dr Jai P. Narain, Director, Communicable Diseases, WHO/SEARO</p> <p>Announcements: Dr Khanchit Limpakarnjanarat, Regional Adviser, Disease Surveillance and Epidemiology (DSE), WHO/SEARO</p>
09:30-10:00	<p><i>Group Photograph</i></p> <p><i>Coffee Break</i></p>
10:00-10:10	<p><b>Business Session</b></p> <p><i>Global and Regional overview of Pandemic H1N1 2009</i></p> <p>➤ Ms Kanokporn Coninx, Technical Officer, Global Influenza Programme, WHO/HQ</p>
10:10-10:20	<p>➤ Dr Khanchit Limpakarnjanarat</p>
<b>Update of current situations on:</b>	
10:20 -10:30	Implementation of influenza preparedness plan – Dr. Suzanne Westman, Medical Officer, Outbreak Alert and Response, WHO/SEARO
10:30 -10:40	Stockpiling of Antivirals – Mr Gilles Cimetiere, Response Operations Manager, DSE Sub-unit, Bangkok

10:40 -10:50	Laboratory capacities – Dr. Rajesh Bhatia, Regional Adviser, Blood Safety and Laboratory Technology (BLT), WHO/SEARO
10:50 -11:30	Discussion
11:40 -12:00	Influenza vaccine and anti-viral medicines production capacity – Ms Kanokporn Coninx
12:00 -12:30	Discussion
12:30 -13:30	Lunch
13:30 -13:45	Strategies and initiative for Pandemic Preparedness and Response Dr Ayana Yeneabat, Team Leader, DSE Sub-unit, Delhi
13:45 -14:00	Discussion
14:00 -14:15	Proposed action plan for Availability and Accessibility of Vaccine and Antivirals – Prof. Dr. Ranjit Roy Chaudhury
14:15 -14:30	Discussion
14:30 -15:00	Orientation for break out session + Coffee Break
15:30 -17:30	Five breakout sessions to draft regional work plan consistent with the objectives of the consultation  Group 1: Intensified surveillance and response and laboratory capacity for pandemic preparedness  Group 2: Non-pharmaceutical intervention during pandemic  Group 3: Influenza vaccine and antiviral production group and NRA  Group 4: Effective Communication group  Group 5: Operating procedure for sharing essential medical supplies, medicines and vaccines in emergency situation
18:00	Reception

**Day 2- Friday, 10 July 2009**

09:00 – 10:30	Five break out sessions to continue
10:30 – 11:00	Coffee Break
11:00 – 12:30	Plenary: Reporting by the five break out groups
12:30 – 13:30	Lunch
13:30 – 15.00	Synthesis of actions required by: <ol style="list-style-type: none"><li>1. National Governments</li><li>2. Private sector</li><li>3. WHO, HQ and SEARO</li><li>4. International partners</li></ol>
15:00– 15:30	Coffee Break
15:30 – 16:30	Conclusion and Recommendations
16:30	Closing Remarks

**Day 3 - Saturday 11 July 2009**

All participants leave hotel for Nakorn Pathom (transportation will be provided – time of departure to be confirmed with MOPH)

09.00-16.00 Field trip to the Influenza Vaccine Pilot Plant at Silpakorn University, Nakorn Pathom

## Annex 4

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An outbreak of febrile respiratory infection was detected in Mexico in March 2009, and later identified to be due to Pandemic H1N1 2009. The World Health Organization declared the Pandemic H1N1 2009 to be a public health emergency of international concern in April 2009. Since then the pandemic has spread far and wide and reached all continents of the globe within a short period of time. In response to requests from Member States of the South-East Asia Region of WHO, a regional consultation on Pandemic H1N1 2009 was organized on 9-11 July 2009 in Bangkok, Thailand. This report provides a summary of the proceedings of the consultative meeting, including situation updates, experiences and lessons learnt, and the strategic actions recommended therein to enhance national capacities in response to the evolving pandemic.



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SEA-CD-193