

## Isolation of Influenza Viruses During the 1977-1978 Epidemic

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**OBJECTIVE :** To define the etiologic agent of the 1977-1978 influenza outbreak in Thailand.

**BACKGROUND :** Since the pandemic of 1968 (1,2) influenza has not been a major public health problem in Southeast Asia. Only minor outbreaks have been reported in rural residents (3,4) and in an isolated hill tribe of northeast Thailand (5). This report summarizes observations made during an influenza outbreak in Bangkok and surrounding provinces in January and February, 1978.

**METHODS :** Throat washings were obtained from patients with acute influenza-like syndromes. Specimens were treated with an antibacterial and antimycotic solution, and inoculated into the amniotic sac of nine to ten days old embryonated chicken eggs. Amniotic and allantoic fluid were harvested 48 to 72 hours later. The presence of hemagglutinating virus was detected using 0.5% chicken red blood cells. Identification of influenza virus isolates was performed by hemagglutination inhibition tests employing reference anti-sera prepared for prototype influenza strains.

**RESULTS :** Sporadic clinical cases of influenza were observed in Bangkok in early January 1978. During this month three of four specimens submitted from Children's Hospital were positive for influenza. These isolates were closely related to influenza A/FM/1/47 (H1N1), which had recently been reported to be causing an outbreak in Moscow. A wide outbreak began in Bangkok in early February 1978 and affected mostly young adults. Fifty-six throat washings were collected from children at four Bangkok schools with typical influenza-like syndromes. Fifteen positive hemagglutinating agents were isolated. In a city near Bangkok, Prachinburi, an outbreak occurred in late February. Four of 14 throat washings from ill school children were positive.

The overall rate of isolation was 22 out of 74 cases. All isolates were shown to be closely related to A/FM/1/47 and A/USSR/90/77 (H1N1) (Table 1). All isolates were from children and young adults ages from 8 to 20 years old; however, clinical illness was rare in adults and therefore no specimens were obtained from adults. Isolates were forward to Walter Reed Army Institute of Research, to the Center for Disease Control in Atlanta and to the WHO reference center in London for confirmation.

Table 1. Hemagglutination inhibition test for identification of influenza isolates 1978.

Antigen	Antiserum							
	A/FM/1/47 (H1N1)	A/NJ/8/76	A/TEX/1/77	B/HK/5/72	A/HK/68	A/JAP/305/57	A/BK/1/78 (H1N1) Rooster antisera	A/USSR/90/77 (H1N1)
A/FM/1/47 (H1N1)	640	<10	<10	<10	<10	<10	640	320
A/NJ/8/76	<10	160	<10	<10	<10	<10	40	<10
A/TEX/1/77	<10	<10	320	<10	<10	<10	<10	<10
B/HK/5/72	<10	<10	<10	320	<10	<10	<10	<10
A/HK/68	<10	<10	20	<10	640	<10	10	<10
A/JAP/305/57	<10	<10	<10	<10	<10	160	<10	<10
A/BKK/1/78 (AFRIMS/001/78)	160	<10	<10	<10	<10	<10	640	320
A/USSR/90/77 (H1N1)	160	<10	<10	<10	<10	<10	640	320
A/BKK/2/78 (AFRIMS/016/78)	160	<10	<40	<10	<10	<10	1280	640
A/BKK/3/78 (AFRIMS/038/78)	160	<10	<10	<10	<10	<10	640	320
A/BKK/4/78 (AFRIMS/082/78)	160	<20	<20	<20	-	-	1280	640
A/BKK/5/78 (AFRIMS/083/78)	80	<20	<20	<20	-	-	640	320
A/BKK/6/78 (AFRIMS/107/78)	40	<20	<20	<20	-	-	320	320
A/BKK/7/78 (AFRIMS/063/78)	160	<20	40	<20	-	-	1280	640
A/BKK/8/78 (AFRIMS/053/78)	40	<20	<20	<20	-	-	320	160

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