

Pandemic Influenza: Pediatric Considerations

James F. Wiley II, MD, MPH

**Professor of Pediatrics and Emergency
Medicine/Traumatology**

University of Connecticut School of Medicine

Pandemic Influenza in Children

- Pertinent Issues
 - Surveillance
 - Susceptibility
 - Care Capability



Children with suspected Avian Flu
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Pandemic Avian Influenza in Children

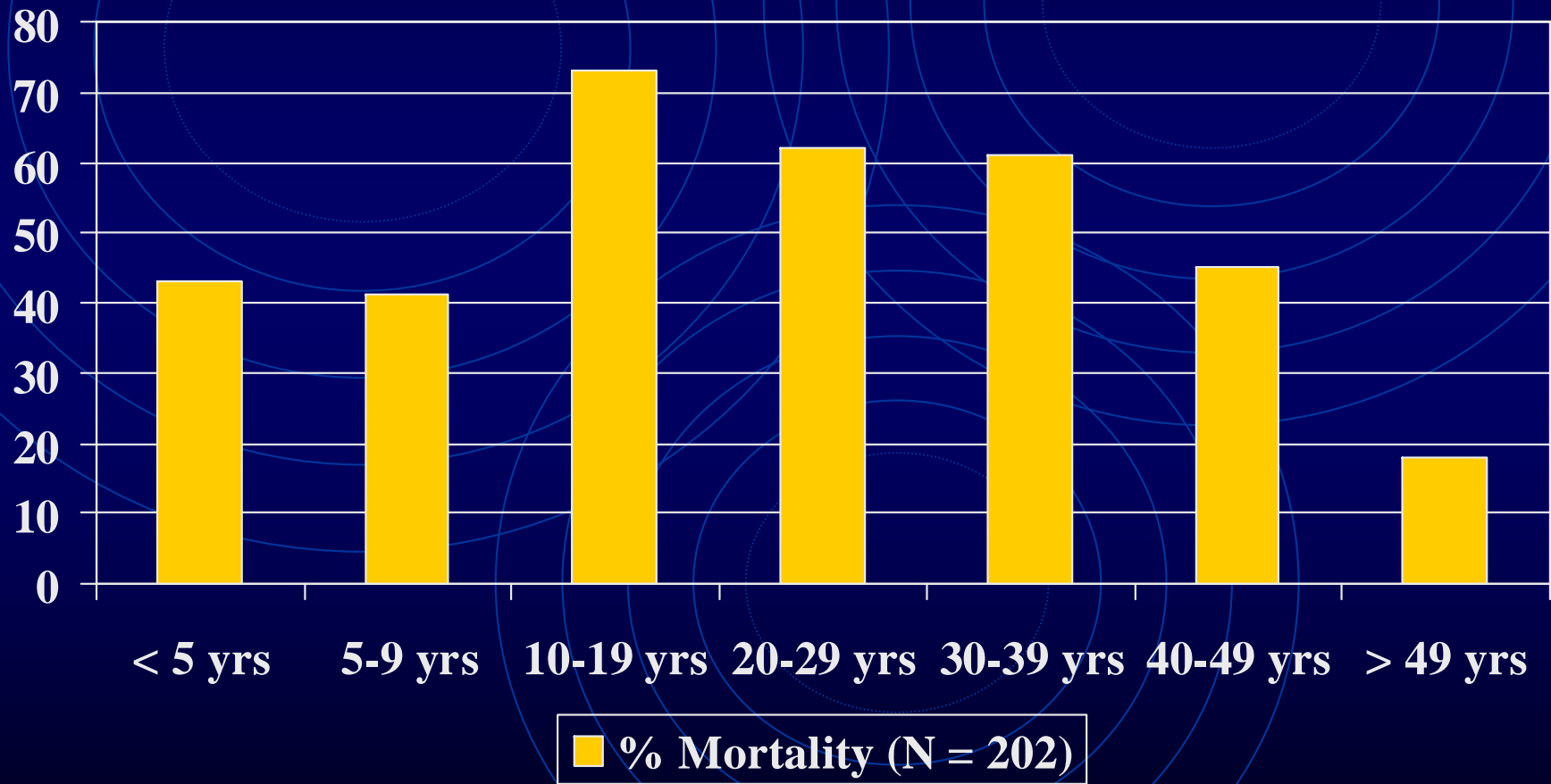
- Surveillance
 - Under 18 account for most cases of Avian Flu so far
 - High Attack Rate (40%, estimated)
 - Schools/day care as potential epicenters of transmission

Children are important population sentinels for flu infection

Pandemic Influenza in Children

- Susceptibility
 - High Case Fatality Rate
- Person to person transmission in families

Case Fatality Rate by Age, Avian Influenza (H5N1)



“Two features are striking: the overwhelming concentration of cases in previously healthy children... and the very high mortality”

From Avian influenza: assessing the pandemic threat. WHO: January, 2005 (WHO/CDS/2005.29)

Avian Influenza (H5N1) Clinical Findings in Children

- Fever
- Cough
- Tachypnea
- Hypoxia
- Vomiting
- Diarrhea
- Coma
- Dehydration
- Lymphopenia
- Thrombocytopenia
- Elevated Liver Enzymes



2 year old with Avian Flu
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Pandemic Influenza in Children

- **Key Care Issues**
 - **Separation from primary caretaker**
 - **Pediatric care capability**
 - **Equipment**
 - **Providers**
 - **Medications**
 - Adequate amounts of liquid oral medication
 - Approved vaccine regimens for children
 - Approved antiviral therapy in children < 1 year.

Pandemic Influenza in Children

- Preparedness Priorities
 - Enhance pediatric capability in General Hospitals
 - Provide pediatric training to volunteer medical providers
 - Ensure adequate supplies and medicines for children

“For nurse Dang Thi Phuong, it was the first time in her 22 years at the hospital she has encountered such a stressful situation.

“I had not had any experience with that kind of disease before, so I felt nervous,” she said.

“We stand beside the (children) around the clock, supervising what happens to them. We care for them like their parents.’ ”

Source © Viet Nam News 2/10/2004

Fig. 2 Distribution of H5N1 cases by age group, as of 30 April 2006 (*n* = 202)
 Fig. 2 Distribution des cas de grippe H5N1 par classe d'âge, au 30 avril 2006 (*n* = 202)

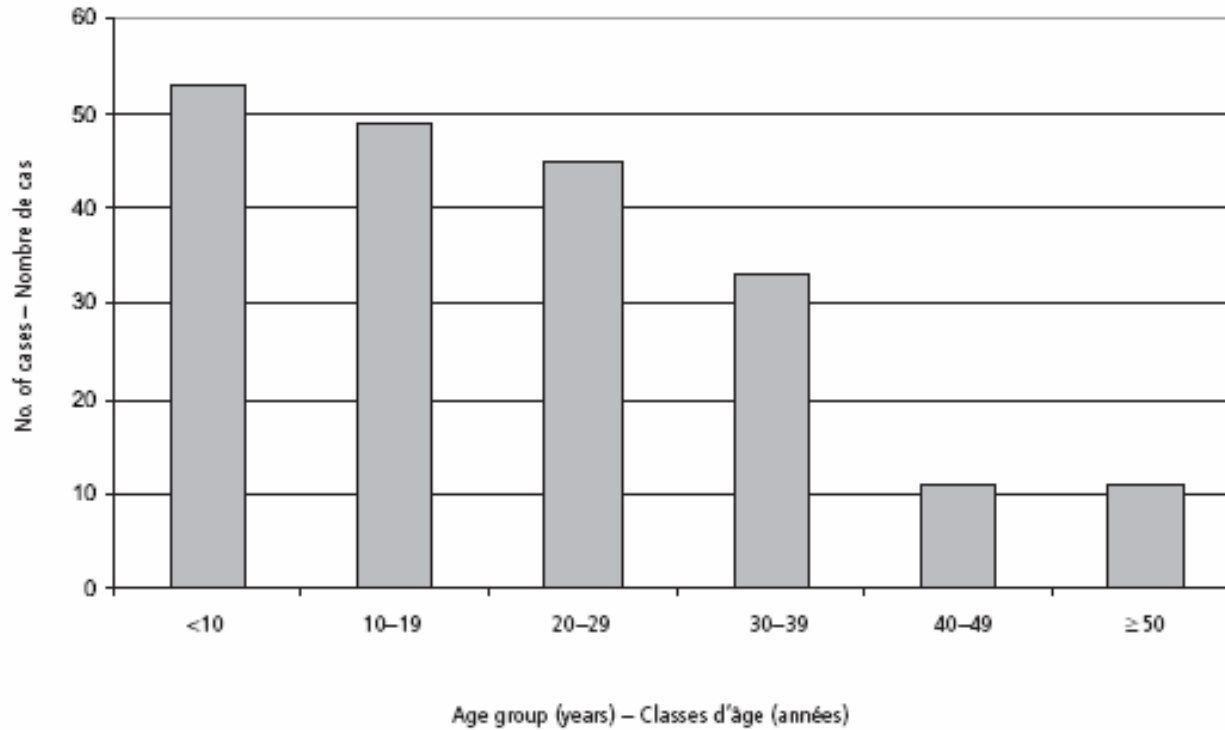


Table 2 Human H5N1 cases by sex and by age group (*n* = 202)
 Tableau 2 Cas de H5N1 détectés chez l'homme par sexe et classe d'âge (*n* = 202)

Age group (years) – Classe d'âge (ans)	Male – Homme	Female – Femme	Sex ratio ^a – Sex-ratio ^a
< 5	13	8	1.6
5–9	19	13	1.5
10–19	18	31	0.6
20–29	18	27	0.7
30–39	17	16	1.1
40–49	5	6	0.8
≥ 50	6	5	1.2
Total	96	106	0.9

Table 3 Case-fatality rate by year of onset and age group (*n* = 202)
Tableau 3 Taux de létalité par année d'apparition des symptômes et par classe d'âge (*n* = 202)

Age group (years) – Classe d'âge (ans)	Case-fatality rate ^a – Taux de létalité ^a				
	2003	2004	2005	2006 ^b	2003–2006 ^b
<5	(0/0)	71 (5/7)	0 (0/8)	67 (4/6)	43 (9/21)
5–9	100 (2/2)	88 (7/8)	21 (3/14)	13 (1/8)	41 (13/32)
10–19	100 (2/2)	85 (11/13)	67 (12/18)	69 (11/16)	73 (36/49)
20–29	(0/0)	50 (5/10)	55 (11/20)	80 (12/15)	62 (28/45)
30–39	(0/0)	75 (3/4)	57 (13/23)	67 (4/6)	61 (20/33)
40–49	(0/0)	50 (1/2)	38 (3/8)	100 (1/1)	45 (5/11)
≥ 50	(0/0)	100 (1/1)	10 (1/10)	(0/0)	18 (2/11)
Total	100 (4/4)	73 (33/45)	43 (43/101)	63 (33/52)	56 (113/202)

^a Case-fatality rates are given as percentages (number of deaths/number of cases). – Les taux de létalité sont donnés en pourcentage (nombre de décès/nombre de cas).

^b Data as of 30 April 2006. – Données allant jusqu'au 30 avril 2006.

Source: Weekly Epidemiology Record 81:249-260, 2006