

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA

SUMMARY MINUTES OF MEETING

March 10, 1976

The Immunization Practices Advisory Committee met in Atlanta, Georgia,
March 10, 1976.

COMMITTEE MEMBERS PRESENT

Dr. David J. Sencer, Chairman
Dr. E. Russell Alexander
Dr. William R. Elsea
Dr. E. Charlton Prather
Dr. Eleanor G. Shore
Dr. Reuel A. Stallones

Ex Officio

Dr. Harry Meyer

Liaison (American Academy of Pediatrics)

Dr. Samuel Katz

OTHERS PRESENT

Dr. Ronald Altman, State Department of Health, Trenton, New Jersey
Dr. Paul Brès, World Health Organization, Geneva, Switzerland
Dr. Martin Goldfield, State Department of Health, Trenton, New Jersey
Dr. Edwin D. Kilbourne, Mt. Sinai School of Medicine, New York
Col. Philip Russell, Walter Reed Hospital, Washington, D.C.
Dr. Geoffrey C. Schild, National Institute for Biological Standards & Control, London
Dr. John Seal, National Institutes of Health, Bethesda, Maryland
Dr. John J. Skehel, National Institute for Medical Research, London

STAFF PRESENT

Bureau of Epidemiology:

Dr. Philip Brachman
Mr. Dennis Bregman
Dr. Michael Gregg
Dr. Michael Hattwick
Dr. Charles H. Hoke, Jr.
Dr. Richard J. O'Brien
Mr. Brad Thomas
Dr. William G. Winkler

Bureau of Laboratories:	• Dr. Walter Dowdle Mr. Harold Kaye Dr. Alan Kendal Dr. Gary Noble Dr. Gregory Tannock
Bureau of State Services:	Dr. John Witte Dr. Lyle Conrad
Office of the Center Director:	Dr. William Foege

The meeting was called to order at 9:00 a.m. by Dr. David J. Sencer, the Committee Chairman. He welcomed Committee members, special consultants, and guests to the meeting. The Chairman discussed the proposed influenza agenda.

INFLUENZA SURVEILLANCE SUMMARY

A detailed review was presented of current influenza surveillance methods and recent findings. A/Victoria/3/75 was first isolated in the U.S. in mid-December 1975 in Hawaii. It was isolated in the State of Oregon during the first week of January 1976, and within 9 weeks had been isolated in all but five states.

Pneumonia and influenza mortality observed in 121 United States cities with a total population of approximately 70 million people showed pneumonia-influenza death reports above the epidemic threshold for five consecutive weeks starting with Week No. 5, 1976. Excess deaths were first seen in the New England and Middle Atlantic States, but at the time of the meeting pneumonia-influenza deaths exceeded the epidemic threshold in all geographic areas. Total pneumonia-influenza deaths had begun to decrease during the preceding week in New England and the Middle Atlantic States. A telephone survey on March 4, 1976, indicated widespread outbreaks in the western half of the United States with regional outbreaks or isolated cases in the eastern half of the United States. An institutional surveillance system was described based on absenteeism in industry and schools as well as emergency room visits in hospitals. The 600 institutions in 35 States included in the system also showed widespread influenza activity during late February and early March.

The global pattern of influenza activity since June 1975 was reviewed. A/Victoria-like virus was isolated in Thailand in July 1975. A/Victoria/3/75 was isolated in Australia in August amidst scattered cases of influenza. Subsequently, A/Victoria-like isolates were made in Singapore, Japan, Kwajalein, Hong Kong, and Hawaii before the end of the year. In the first 9 weeks of 1976, A/Victoria-like isolates have been reported from Finland with localized outbreaks, United Kingdom with widespread outbreaks, Jamaica, Romania, France, and Belgium.

B/virus has been isolated from scattered cases in Uruguay, Hong Kong, Hawaii, the United Kingdom, Spain, Switzerland, and Denmark.

In summary, A/Victoria-like strains have this year caused the most widespread outbreaks of influenza in the United States since 1968. In addition, Victoria-like strains have been seen around the world.

SWINE-LIKE VIRUS INFECTIONS OF MAN

Surveillance

The influenza experience at Ft. Dix was discussed in detail. A relatively circumscribed outbreak of a swine influenza was observed in January 1976, which appears to have terminated by mid-February 1976. No seroconversions to swine influenza are known in recruits prior to Christmas 1975. The first positive case had onset of symptoms on the 12th of January and showed a seroconversion to swine influenza. A total of 13 cases have now been documented, in five cases by virus isolation and in eight cases by seroconversion. One fatal case occurred with onset of symptoms in early February. The patient was seen in the dispensary on the 3rd of February with a temperature of 100.4°F. He was put on quarters and the next day participated in a march. He left the march and died before reaching the hospital. Pathologic reports were typical of influenza-pneumonia and cultures of the trachea and lung were positive for A/Swine influenza. Bacteriological cultures were negative.

Approximately 12,000 persons are based at Ft. Dix. Approximately 7,000 of these are recruits receiving basic training in 35 companies of 200 recruits per company. Within the first few days after arriving, recruits receive adenovirus vaccine and Port Chalmers flu vaccine. During December and early January, approximately 1% of recruits were hospitalized per week with respiratory symptoms. By the week of January 24 this had increased to 2.5% and by January 31 to 2.8%. Serologic surveys for A/Swine influenza have shown 77 positives in 625 sera collected from the 35 companies. The positivity rate in three companies was 50% or greater and in eight companies more than 20% of the sera tested were positive for A/Swine influenza.

In summary, a definite person-to-person outbreak of A/Swine influenza has been documented at Ft. Dix in January and early February of 1976. Thirteen cases have been observed with positive virus isolation or seroconversion and other cases are assumed based on a single serology.

Evidence for swine influenza infections outside of Ft. Dix was lacking. Studies on premarital sera in New Jersey show no increase in serologies positive for A/Swine influenza in the last half of 1975, as compared to early 1976. A study of 22 Army recruits with a history of swine contact and positive HI titers to A/Swine influenza was undertaken to determine if there was evidence of spread in their families and their close contacts. A total of 152 sera had been received on families and close contacts and, of this number, 81 had been tested with nine positives. Of the nine positive sera only two were in the age group under 40. Even these cases do not provide evidence of spread in the civilian population as antibody titers

to A/Swine influenza are seen in a small number of persons vaccinated with influenza vaccine or in individuals who have experienced disease with H3N2 strains of influenza.

In summary, no evidence of spread outside of Ft. Dix was available at the time of the meeting.

CHARACTERISTICS OF ISOLATES

Between November 1, 1975 and March 6, 1976, 320 influenza A strains were examined by the WHO Collaborating Center for Influenza, Center for Disease Control, and all were typed as H3 hemagglutinin strains, except for the four isolates obtained from recruits at Ft. Dix and submitted by the New Jersey State Department of Health. These New Jersey isolates, represented by A/New Jersey/8/76(Hsw1N1) were shown by HI and NI testing to possess hemagglutinin and neuraminidase similar to those of recent swine influenza A strains. However, these New Jersey isolates demonstrate significant antigenic drift of both hemagglutinin and neuraminidase away from the early A/Swine/1976/31 strain isolated in 1931 and used in vaccines for humans in the late 1950's. Antigenic analysis also confirmed that several vaccine candidate strains, with higher growth yield than the original A/New Jersey/8/76 isolate, have hemagglutinin and neuraminidase antigens similar to these Hsw1N1 strains from Ft. Dix.

SERODIAGNOSIS

Tests for HI antibody to A/New Jersey/8/76(Hsw1N1) in sera obtained in Atlanta during February 1976 showed that age specific prevalence of titers ≥ 10 increased with age: 5% in those under 20 years, 8% in 21-30 year olds, 27% in 31-40 year olds, 29% in 41-50 year olds, and 100% in those 51 years of age and over. The mean titers of those with antibody was highest in the 50 plus age group and in the Ft. Dix recruits. Examination of paired sera from 126 patients infected since January 1975 with A/Port Chalmers/1/73(H3N2) and A/Victoria/3/75(H3N2) revealed that four (3%) also had HI antibody titer rises to Hsw1 hemagglutinin. Of 81 persons with a \geq four-fold antibody titer rise after receiving bivalent vaccine containing either A/England/42/72 (20 persons) or A/Port Chalmers/1/73 plus A/Scotland/840/74 (61 persons), nine (11%) also showed an Hsw1 titer rise. Thus, infection or vaccination with human influenza strains may occasionally result in an accompanying Hsw1 antibody rise.

IMMUNIZATION RECOMMENDATIONS 1976-77

The Committee concluded that person-to-person spread of A/Swine influenza virus is well documented in the Ft. Dix outbreak. Based on previous experience with new influenza strains, it is unlikely that a single outbreak will conclude the activities of this strain. It is likely that other outbreaks are currently in progress or will be in the future.

Recent experiences with A/Victoria-like strains emphasize the difficulties of reacting quickly when a new strain is first isolated. Widespread outbreaks were reported within 6 weeks of the first isolation in the continental United States in January 1976. It would have been difficult or impossible to have mounted vaccination programs with sufficient speed to have blunted the outbreaks of February and March. It was also agreed that influenza outbreaks due to A/Swine influenza are possible next winter. It was, therefore, agreed that the production of vaccine must proceed and that a plan for vaccine administration be developed.

In conclusion, it is felt that intense surveillance should continue and that two vaccine recommendations are likely to be required. For high risk groups, as previously defined by the Committee, a vaccine consisting of A/Victoria and A/Swine might be desirable. Even though many people in the higher risk groups are over the age of 50 and may have antibodies to swine influenza, it cannot be assumed that they are protected from A/Swine disease. Second, a monovalent A/Swine influenza vaccine should be produced in sufficient quantities to protect the remainder of the population. The Committee felt that such a program should be encouraged under Federal auspices to involve vaccine purchase as well as a delivery mechanism.

The meeting was concluded at 3:45 p.m.

I hereby certify that, to the best of my knowledge, the foregoing summary of minutes is accurate and complete.

David H. Anderson MAR 3 1976
Chairman Date