Louisiana

LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION
DIVISION OF HEALTH

# MONTHLY MORBIDITY REPORT

**Provisional Statistics**

FROM THE

OFFICE OF PUBLIC HEALTH STATISTICS

Reported Morbidity
July, 1976



# RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICE

## Influenza Vaccine — Supplemental Statement*

### INTRODUCTION

This Committee's preliminary statement on influenza for 1976-77 was published in early June.* In it there was extensive reference to field trials of prototype vaccines to be used in the National Influenza Immunization Program. The trials were conducted to provide a basis for making specific recommendations on vaccine formulation and vaccine dosage for different age groups and for accurately describing the side effects that might be expected to follow vaccination.

Data from these field trials were analyzed at an Influenza Workshop held in Bethesda, Maryland, on June 21, 1976. The Workshop was sponsored by the National Institute of Allergy and Infectious Diseases (National Institutes of Health), the Bureau of Biologics (Food and Drug Administration), the Center for Disease Control, all in the Department of Health, Education, and Welfare, and by the Department of Defense—the same agencies that had sponsored the vaccine studies. The following summary of results, of partial recommendations on swine influenza vaccination for adults, and of related comments and recommendations has been derived from review of field trial data and consideration of other important issues.

### SWINE INFLUENZA VACCINE FIELD TRIALS (SPRING 1976)

Field trials of prototype vaccines from the 4 United States influenza vaccine producers involved more than 5,200 adults and children. The trials were designed to evaluate the immunogenicity and reactogenicity of different doses of swine influenza vaccines. Trials were double-blind with placebo controls and used comparable protocols and analytical methods. All serum samples were tested at CDC.

Vaccines in the field trials were monovalent preparations of swine influenza virus (Hsw1N1), bivalent preparations including both swine influenza virus and A/Victoria/75 (H3N2), and monovalent B preparations containing B/Hong Kong/72. All manufacturers used standard procedures to purify, concentrate, and inactivate the virus. Two manufacturers supplied whole-virus vaccines, and 2 provided split-virus (chemically disrupted) vaccines.

Preliminary analysis of field trial data provides the following general conclusions:

1. Approximately 90% of the vaccinees 25 years of age or older responded well to even the lowest adult dose (200 CCA units) of monovalent swine influenza vaccines; whole-virus and split-virus vaccines induced comparable antibody responses. Vaccine side effects, principally low-grade fever, malaise, and myalgia, among the adult volunteers were most frequent with the highest test dose (800 CCA units) of whole-virus vaccines. Only about 2% of adults receiving 200 CCA unit vaccines had any such effects, a rate essentially equivalent to that following injection of placebo material.

2. Children 3-10 years old had less favorable immune responses to the swine influenza vaccines than did adults. Although whole-virus vaccines were considerably more effective inducers of antibody in this age group than were split-virus vaccines, the whole-virus antigens were also more reactogenic, even at the lowest childhood doses used (50 and 100 CCA units). Additional field trials with children and adolescents will be needed to measure the immunogenicity and reactogenicity of other doses of vaccine and the benefit of second doses.

3. Young adults ages 18-24 had less favorable anti-

SOURCE *Morbidity and Mortality Weekly Report*, Vol. 25, No. 28, Center for Desease Control, D.H.E.W., July 23, 1976, pp. 221-227.

*Supplemental to Influenza Vaccine — Preliminary Statement, published in the MMWR (25)21:165-171, June 4, 1976.

body responses to the swine influenza vaccines than did older adults. Like younger children, their best responses were to whole-virus vaccines, particularly to the most potent ones tested (800 CCA units). However, persons in this age group experienced considerably fewer side effects to the more potent vaccines than did young children.

4. Bivalent A vaccines containing both swine influenza virus and A/Victoria/75 virus, either whole or split, at 200 CCA or 400 CCA units of each component antigen, were about equally immunogenic in persons 25 years of age or older. They were less effective in younger persons. Side effects from these vaccines were similar in adults to those from monovalent swine influenza vaccines.

5. Monovalent B/Hong Kong/72 vaccines containing 500 CCA units of antigen produced good antibody responses in nearly all adult vaccinees tested. The antigen induced few side effects of its own, and, when given simultaneously with bivalent A vaccine, did not appear appreciably to enhance reactogenicity.

6. Vaccines administered by needle/syringe and by jet injector produced comparable rates of seroconversion and levels of antibody response.

## INFLUENZA VACCINE RECOMMENDATIONS

### General Comments

Results of the recent field trials provide clear evidence that adults of approximately 25 years of age or older can safely and effectively be immunized against A/New Jersey influenza with a single dose of vaccine. Furthermore, the trials indicate that younger adults and children as young as 3 years old can also be safely immunized but that additional data will be needed before specifying the precise vaccine potency and optimal schedule for them. Although data from additional field studies will be needed to substantiate and complete recommendations for the young adult and childhood age groups, plans for vaccinating all age groups of the population should continue.

Studies underway now and others soon to begin should be completed by mid-to-late-September in time for vaccination programs to proceed.

The current recommendations address the population above secondary school age, namely that 18 years of age and older. Although within this adult group, those 18-24 years old are immunologically distinctive from those 25 years of age and older, as a result of having had less experience with various naturally occurring influenza viruses, all persons in this age group can be given the same potency vaccine. If additional vaccine trials in the 18- to 24- year-old group indicate that sufficient benefit will be derived from a second dose of vaccine, it will be recommended. Furthermore, since whole-virus vaccine produces better antibody responses in the 18- to 24- year-old group, plans should be made to utilize this vaccine for this group.

### Swine Influenza Vaccine Formulations

For those 18 years of age and older, influenza vaccines, both monovalent A and bivalent A, will contain 200 CCA units of A/New Jersey/76 (swine influenza virus). The bivalent A vaccine will also contain 200 CCA units of the A/Victoria/75 antigen. A single dose of either vaccine should result in antibody responses against swine influenza generally considered protective in at least 85-90% of vaccinees of approximately age 25 or more. Persons 18-24 years of age will probably not respond as well to the swine influenza antigen, but at least 85% of those receiving whole-virus vaccine should develop demonstrable antibodies.

Side effects from these vaccines, including 1-2 days of low grade fever, malaise, and myalgia, should occur in less than 2-3% of vaccinees 18 years of age or older.

### High-Risk Persons 18 Years of Age and Older

**Bivalent A Vaccine:** *One* dose of *bivalent A* influenza vaccine containing 200 CCA units of A/New Jersey/76 (swine influenza virus) and 200 CCA units of A/Victoria/75 should be given. (As noted, if additional field trials show sufficient benefit from a second dose for persons 18-24 years old, it will be recommended.)

**Monovalent B Vaccine:** *One* dose of *monovalent B* influenza vaccine containing 500 CCA units of B/Hong Kong/72 should be given. This vaccine will be available only through commercial sources. It can be given at the same time as the bivalent A vaccine or at another time. If given concurrently, slightly enhanced side effects might be observed. In vaccinating an adult who has previously experienced significant side effects from influenza vaccines, it would be prudent to give the 2 vaccines separately, preferably with the bivalent A vaccine's being given a few days or a week or more before the monovalent B vaccine.

### General Population 18 Years of Age or Older

**Monovalent A Vaccine:** *One* dose of *monovalent A* influenza vaccine containing 200 CCA units of A/New Jersey/76 (swine influenza virus) should be given. (As noted, if additional field trials show sufficient benefit from a second dose for persons 18-24 years old, it will be recommended.)

### General Population 17 Years of Age or Younger

**Monovalent A Vaccine:** Recommendations will be made based on results of studies now underway.

### Precautions

Before being vaccinated, persons known to be hypersensitive to egg protein should be given a skin test or other allergy-evaluating test using the swine influenza vaccine as the antigen. Persons with adverse reactions to such testing should not be vaccinated.

Persons with acute febrile illnesses should not be vaccinated until they have recovered.

## SIDE EFFECTS AND REACTIONS, GENERAL ASPECTS

Side effects of influenza vaccine are generally inconsequential and occur at low frequency. Severe reactions are uncommon, and truly disabling effects appear to be exceedingly rare. Three types of responses to influenza vaccines have been described:

1. Fever, malaise, myalgia, and other systemic symptoms of toxicity occurring 6-12 hours after vaccination and persisting 1-2 days. These responses to influenza vaccine are usually attributed to characteristics of the influenza virus itself (even though it is inactivated in available vaccines) and represent the bulk of the side effects

of influenza vaccination. Such effects occur most frequently in children and in others who have had no previous experience with influenza viruses comparable to the vaccine antigen(s).

2. Immediate, presumably allergic, responses, such as flare and wheal or various respiratory expressions of hypersensitivity. These reactions are exceedingly uncommon but can occur after influenza vaccination. They probably derive from exquisite sensitivity to some vaccine component, most likely to residual egg protein. Although current influenza vaccines contain only a minute quantity of egg protein, they do, on rare occasions, provoke hypersensitivity reactions.

3. Neurologic disorders, including such central nervous system conditions as encephalopathy, with at least temporal association with influenza vaccination. A survey of the medical literature since the early 1950s revealed only about a dozen such reports. Almost all persons affected were adults, and the described clinical reactions began as soon as a few hours and as late as 2 weeks after vaccination. Full recovery was almost always reported.

Three fatalities have been reported in temporal association with influenza vaccination. However, in 2 instances, the patients displayed clinical characteristics and had antecedents which strongly suggested causes other than influenza vaccine, and the third was equally compatible with another viral disease.

In summary, influenza vaccine has only rarely, if ever, been associated with severe adverse reactions or permanent disability. Although vaccination relatively frequently causes transient redness and tenderness at the injection site and sometimes causes such systemic reactions as low-grade fever, malaise, and myalgia for 1-2 days, influenza vaccine is considered to be very safe and is quite suitable for widescale, community use.

**PREGNANCY**

Elevated rates of maternal and fetal mortality and of congenital anomalies and other fetal effects resulting from influenza infection during pregnancy have been widely discussed. Numerous reports during the 1918-19 influenza pandemic and a limited number of small but better controlled studies in 1957-58, when the Asian influenza pandemic occurred, suggest that influenza can result in increased maternal deaths and fetal wastage. However, a number of prospective studies in the past decade or more have failed to corroborate this association. Although there are no persuasive data to document that pregnancy is a risk-factor with influenza, the effect of swine influenza in pregnancy cannot be forecast with assurance.

Physicians generally avoid prescribing unnecessary drugs and biologics for pregnant women, especially in the first trimester; however,there are no data specifically to contraindicate vaccination with the available killed virus vaccine in pregnancy. Women who are pregnant should be considered as having essentially the same balance of benefits and risks regarding influenza vaccination and influenza as the general population.

# "SWINE" INFLUENZA-SELECTED NOTES

The survey of private physicians carried out by the Division of Health has revealed strong interest in the immunization program. Approximately 700 cards out of 5,000 mailed out to all specialities have been returned.

Though all physicians will have sufficient vaccine available, initial allotments may be limited in order to allow institutional programs to get started and to test out accountability and control systems.

All those distributing and administering vaccine are under a requirement to report weekly totals of vaccine usage by type and by age groups of recipients. Limited vaccine supply makes this control requirement necessary and subsequent disbursement of vaccine will depend upon compliance. Simple forms will be supplied by the Division of Health.

For the most part vaccine will be available at local health units. Metropolitan distribution systems are still being considered.

Bivalent vaccine is still expected in late August and will be distributed initially to nursing homes, hospitals and physicians, and groups serving medical high risk groups and the elderly.

In September, monovalent vaccine for the general population will be available and the mass campaign will begin. Specially trained teams will travel parish to parish, manning community clinics and administering the monovalent vaccine free of charge with jet injector guns. Local coordinating committees and health units have the responsibility for site selection, volunteer recruitment, etc. Vaccine will also be distributed to physicians, health and medical institutions, business and industry and other organizations with medical capability for "in house" immunization programs.

# SELECTED REPORTABLE DISEASES

(By Place of Residence)

| STATE AND PARISH TOTALS<br>Reported Morbidity<br>July, 1976 | ASEPTIC MENINGITIS | DIPHTHERIA | ENCEPHALITIS | ENCEPHALITIS, POST INFECTIOUS | HEPATITIS A AND UNSPECIFIED | HEPATITIS B | TUBERCULOSIS, PULMONARY | MENINGOCOCCAL INFECTIONS | PERTUSSIS | RABIES IN ANIMALS | RUBELLA* | SEVERE UNDERNUTRITION | SHIGELLOSIS | TYPHOID FEVER | OTHER SALMONELLOSIS | TETANUS | MEASLES | GONORRHEA | SYPHILIS, PRIMARY AND SECONDARY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL TO DATE 19 75 | 100 | 0 | 18 | 10 | 320 | 104 | 301 | 26 | 24 | 3 | 284 | 11 | 87 | 4 | 85 | 3 | 1 | 13065 | 305 |
| TOTAL TO DATE 19 76 | 39 | 0 | 8 | 4 | 286 | 84 | 321 | 32 | 3 | 3 | 86 | 9 | 33 | 2 | 51 | 2 | 182 | 11313 | 368 |
| TOTAL THIS MONTH | 12 | 0 | 1 | 0 | 41 | 13 | 38 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | 5 | 1602 | 59 |
| ACADIA | 1 | | | | 1 | 1 | | | | | | | | | | | | 16 | |
| ALLEN | | | | | | | | | | | | | | | | | | 3 | |
| ASCENSION | | | | | 1 | | | | 1 | | | | | | | | | 2 | 5 |
| ASSUMPTION | | | | | | | | | | | | | | | | | | 5 | |
| AVOYELLES | | | | | | | | | | | | | | | | | | 4 | |
| BEAUREGARD | | | | | | | | | | | | | | | | | | 5 | |
| BIENVILLE | | | | | | | | | | | | | | | | | | 3 | |
| BOSSIER | 1 | | | | | 1 | | | | | | | | | | | | 15 | 1 |
| CADDO | | | | | 1 | 2 | 4 | | | | | | | | | | | 187 | 3 |
| CALCASIEU | | | | | 1 | 1 | 5 | | | | | | | | | | | 114 | |
| CALDWELL | | | | | | | | | | | | | | | | | | | |
| CAMERON | | | | | | | 2 | | | | | | | | | | | | |
| CATAHOULA | | | | | | | | | | | | | | | | | | 2 | |
| CLAIBORNE | | | | | | | | | | | | | | | | | | 1 | |
| CONCORDIA | | | 1 | | | | 1 | | | | | | | | | | | 3 | |
| DESOTO | | | | | | | | | | | | | | | | | | 6 | |
| EAST BATON ROUGE | 1 | | | | 3 | 1 | 4 | | | | | | | | 1 | | 1 | 54 | 2 |
| EAST CARROLL | | | | | | | | | | | | | | | | | | 2 | |
| EAST FELICIANA | | | | | | | | | | | | | | | | | | | 1 |
| EVANGELINE | | | | | 1 | 1 | 1 | | | | | | | | | | | 1 | |
| FRANKLIN | | | | | | | | | | | | | | | | | | 4 | |
| GRANT | | | | | | | | | | | | | | | | | | 1 | |
| IBERIA | | | | | | | 2 | | | | | | | | 1 | | | 5 | 4 |
| IBERVILLE | | | | | | | | | | | | | | | | | | 17 | |
| JACKSON | | | | | | | | | | | | | | | | | | 2 | |
| JEFFERSON | | | | | 3 | 1 | 1 | | | | | | | | 2 | | 3 | 71 | 3 |
| JEFFERSON DAVIS | | | | | | | | | | | | | | | | | | 4 | |
| LAFAYETTE | | | | | | | | | | | | | | | 1 | | | 41 | 3 |
| LAFOURCHE | | | | | 1 | 1 | | | | | | | | | | | | 5 | |
| LASALLE | | | | | 3 | | | | | | | | | | | | | 2 | |
| LINCOLN | | | | | | | 1 | | | | | | | | | | | 21 | 1 |
| LIVINGSTON | | | | | 1 | | 1 | | | | | | | | | | | 3 | |
| MADISON | | | | | | | | | | | | | | | | | | 5 | |
| MOREHOUSE | | | | | | | 1 | | | | | | | | | | | 10 | |
| NATCHITOCHES | | | | | | | | | | | | | | | | | | 16 | |
| ORLEANS | 8 | | | | 2 | 1 | 9 | 2 | | | | | | | | | 1 | 616 | 25 |
| OUACHITA | | | | | 1 | | | | | | | | | | | | | 60 | 1 |
| PLAQUEMINES | | | | | | | | | | | | | | | | | | 7 | |
| POINTE COUPEE | | | | | | | | | | | | | | | | | | | 1 |
| RAPIDES | | | | | 1 | | | | | | | | | | | | | 64 | |
| RED RIVER | | | | | | | | | | | | | | | | | | | |
| RICHLAND | | | | | | | 4 | | | | | | | | | | | 6 | |
| SABINE | | | | | | | | | | | | | | | | | | 6 | |
| ST. BERNARD | | | | | 1 | 2 | | | | | | | | | | | | 1 | |
| ST. CHARLES | | | | | | | | | | | | | | | | | | 7 | |
| ST. HELENA | | | | | | | | | | | | | | | | | | 1 | |
| ST. JAMES | | | | | 1 | | | | | | | | | | | | | 1 | 1 |
| ST. JOHN | | | | | | | | | | | | | | | | | | 5 | |
| ST. LANDRY | | | | | 2 | | 1 | | | | | | | | | | | 5 | |
| ST. MARTIN | | | | | | | | | | | | | | | | | | 7 | |
| ST. MARY | | | | | | | 1 | | | | | | | | | | | 3 | 1 |
| ST. TAMMANY | | | | | 2 | | | | | 1 | | | | | 2 | | | 27 | |
| TANGIPAHOA | | | | | 6 | | | | | | | | | | | | | 16 | |
| TENSAS | | | | | | | | | | | | | | | | | | | |
| TERREBONNE | | | | | 2 | 1 | | | | | | | | | | | | 6 | 5 |
| UNION | | | | | | | | | | | | | | | | | | 7 | |
| VERMILION | | | | | | | | | | | | | | | | | | 1 | |
| VERNON | | | | | 1 | | | | | | | | | | | | | 53 | |
| WASHINGTON | 1 | | | | 6 | | | | | | | | | | 1 | | | 15 | 1 |
| WEBSTER | | | | | | | | | | | | | | | | | | 10 | |
| WEST BATON ROUGE | | | | | | | | | | | | | | | | | | 8 | |
| WEST CARROLL | | | | | | | | | | | | | | | | | | 1 | |
| WEST FELICIANA | | | | | | | | | | | | | | | | | | 34 | 1 |
| WINN | | | | | | | | | | | | | | | | | | 4 | |
| OUT OF STATE | | | | | | | | | | | | | | | | | | 1 | |

* Includes Rubella, Congenital Syndrome

From January 1 through July 31, the following cases were also reported: 4-Brucellosis; 2-Leptospirosis, 1-Malaria contracted outside the U.S.A.