

# Monitoring the Safety of a Novel Influenza Vaccine

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# **Planning for Vaccine Safety Monitoring**

- **No decisions made yet about full production and use of a vaccine for novel H1N1 influenza**
- **If we do recommend use of a novel influenza vaccine, vaccine safety monitoring will be an important aspect of the program**
- **Planning now so we can be prepared to implement safety monitoring if vaccination is undertaken**

# Planning Challenges

- **Concurrent use with seasonal influenza vaccines**
- **Multiple manufacturers**
- **Possibility of adjuvanted vaccine**
- **Anticipated need for 2 doses in at least some persons**
- **Possibility of unanticipated adverse events**
- **Vaccination of a large number of people in a short time**
- **Historical experience with A/New Jersey/1976 vaccine**

# More Planning Challenges

- **Lack of certainty about**
  - **target groups for initial use of vaccine**
  - **In which settings vaccine will be administered**

# Guillain-Barré Syndrome

- **An acute inflammatory demyelinating polyneuropathy of unknown origin, thought to be of autoimmune origin**
- **May be triggered by antecedent infection**
  - *Campylobacter jejuni*
  - Respiratory infections
- **Incidence rate in adults about 2 per 100,000 person-years**
  - increases with increasing age

# **Guillain-Barré Syndrome and the A/New Jersey/1976 Vaccine**

- **National Influenza Immunization Program suspended December 1976, when preliminary data suggested an increased risk of GBS among vaccinees**
- **Subsequent analyses suggested an attributable risk of vaccine-related GBS among adults of about 1 case per 100,000 vaccinees**

# **Guillain-Barré Syndrome and Other Influenza Vaccines**

- **Studies of subsequent influenza vaccines have not found a consistent association with GBS, and when it has been found, the attributable risk has been small**
  - **U.S. 1992-1993 and 1993-1994 seasons combined: about one case per 1,000,000 persons vaccinated**

# Objectives for Safety Monitoring

- **Timely identification of clinically significant adverse events following receipt of novel influenza vaccine**
- **Rapid assessment of significance of adverse events**
- **Evaluation of the risk of GBS associated with the novel influenza vaccine**

# **Timely Identification of Clinically Significant Adverse Events**

- **Enhanced surveillance through the Vaccine Adverse Event Reporting System**
- **Active surveillance using sequential analytic methods through one or more Vaccine Safety Datalink sites**

# Enhanced Surveillance through VAERS

- **VAERS is**
  - **National in scope**
  - **Flexible**
  - **Scalable**
  - **Designed to accept reports from vaccinees**
- **Enhancements**
  - **Comprehensive communications efforts to support reporting, including providing information at the time of vaccination**
  - **Facilitate reporting of manufacturer and lot number by providing written record**

# **Active Surveillance using Sequential Analytic Methods**

- **Allows rapid assessment of prespecified adverse events**
  - **Simultaneous analysis with appropriate comparison group**
  - **Chart confirmation is feasible**
- **Can relatively quickly identify events that are of highest priority for further investigation**
- **Will require that accurate information on vaccination be available in managed care databases**

# **Rapid Assessment of Significance of Adverse Events**

- **Certain pre-specified adverse events can be assessed through sequential analytic approach**
- **Approaches for other adverse events:**
  - **Rapid study utilizing linked immunization and outcome records**
  - **Comparison of observed cases with expected cases, based on known incidence rates**
  - **Field investigation, in collaboration with State Health Departments**

# Evaluation of the Risk of GBS Associated with the Novel Influenza Vaccine

- **Active, unbiased case finding of incident GBS cases in multiple areas**
- **Ascertainment of vaccination status and other risk factors for GBS**
- **Will be seeking expert input into planning**

# Unresolved Issues

- **Role of Vaccine Safety Datalink sites in vaccine administration under state and county plans**
- **How to facilitate collection of accurate information on manufacturer and lot number**