
H1N1 influenza vaccine safety update and current issues

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on behalf of Global Advisory Committee on Vaccine Safety

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WHO Virtual Consultation on the Safety of Adjuvanted Influenza Vaccines

Objectives

To review known and theoretical safety concerns associated with using adjuvants in influenza vaccines

To discuss ways to prospectively evaluate vaccine safety

Outcomes

Unknown risks in certain age and risk groups where there are limited or no data with adjuvanted influenza vaccines

No clinical data to assess the risk or benefit of using adjuvanted or non-adjuvanted influenza vaccines against novel H1N1 virus

Currently, no significant safety concern or barriers to evaluating or using adjuvanted vaccines for the current H1N1 vaccine were raised

Global Advisory Committee on Vaccine Safety and GACVS influenza sub group meeting

Objectives

To consider risk analysis of Guillain Barré Syndrome following influenza vaccine administration

To discuss safety of adjuvanted influenza vaccines

To discuss safety surveillance options

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Outcomes

The attributable risk of GBS was approximately 1 per 100,000 persons vaccinated with Hsw1N1 in 1976. Underlying mechanism remains unknown.

Studies of other influenza vaccines since 1976 have shown either no association with GBS or a very small risk (e.g. 1 per 10 million attributable risk of less than 1 per million).

As the new H1N1 influenza virus is in part of swine lineage, active surveillance of GBS cases using common protocols and case definitions is essential.

Baseline rates in unvaccinated populations are required for assessment of association between GBS and vaccines against novel H1N1 virus, as well as between GBS and influenza illness caused by this virus.

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Outcomes, cont'd

Limited or no data on safety and immunogenicity:

Adjuvanted influenza vaccine use
in certain populations, e.g. young children
(< 3yr) and pregnant women

Preservative / oil-in-water adjuvant interactions

Use of different vaccines for 1st and 2nd dose

Concurrent use of novel H1N1 vaccine
with seasonal influenza vaccine

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Outcomes, cont'd

H1N1 vaccines will be heterogeneous in formulation,
antigen presentation and substrate used for manufacturing

Safety profiles may significantly differ among products

Safety may differ from that of licensed seasonal

influenza

Challenges in selecting conditions to include in risk management
/ post marketing surveillance plans

Method of vaccine deployment has an impact on postmarketing
surveillance

Postmarketing surveillance

Types of surveillance

Passive surveillance – are national systems capable of monitoring vaccine-associated events in all age groups, at distant points of time, and by all health care providers

Surveillance for programmatic errors

Active surveillance for GBS – acute flaccid paralysis surveillance modified to capture cases in all age groups using common case definition

Active surveillance of other selected serious events

Phase IV studies in selected locations

Disease surveillance and assessment of vaccine effectiveness

MULTITUDE OF DESIGNS, VARIETY OF LIMITATIONS, TIMELINESS

Postmarketing surveillance

Methodology

Minimal data set for AEFI reporting

Source of data (health care databases, AEFI reports)

**Linkage of vaccine administration and AEFI report data
(correct identification of specific product/lot for each dose)**

Signal generation

Analysis

Further steps – additional studies

International collaboration

Strategy

Signal generation –

National programmes

WHO International Drug Monitoring Programme

(consider delays and limitations for vaccine reports)

Information sharing –

Bilateral regulatory agreements

WHO regulatory networks

Publicly disclosed information

Interaction with manufacturers

Rapid alert systems –

Regulatory and public health authority interactions

Pharmacovigilance networks (at present limited)

International Health Regulation

Alternative system for the H1N1 vaccine use ???

International collaboration

Strategy, cont'd

Assistance with investigation or analysis of safety data –
Bilateral agreements, international health programmes
WHO
Global Public Health Intelligence Network

Common case definition –
Brighton Collaboration
Other definitions

Surveillance tools –
Study protocols
Guidelines for recognizing and reporting of AEFI

Conclusion

LIMITED INFORMATION

TIME CRUNCH

MANY UNCERTAINTIES

Timely collection and assessment
of safety and immunogenicity data

MODIFICATIONS WHEN
WARRANTED

RAPID INFORMATION SHARING