

The National Vaccine Injury Compensation Program (VICP)

Discussion of Petition to Add Neurologic Injuries to Vaccine Injury Table for the Influenza Vaccines

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Background

Vaccine Injury Table

- **The National Childhood Vaccine Injury Act of 1986 (Act), as amended, authorizes the Secretary to create and modify a list of injuries, disabilities, illnesses, conditions, and deaths (and their associated time frames) associated with each category of vaccines included on the Vaccine Injury Table.**
 - permits the Table to be modified through Federal rulemaking
 - states that any person may petition the Secretary to modify the Table



Background Cont.

Vaccine Injury Table

- “Any person (including the ACCV) may petition the Secretary to propose regulations to amend the Vaccine Injury Table. Unless clearly frivolous, or initiated by the Commission, any such petition shall be referred to the Commission for its recommendations. Following –
 - (A) Receipt of any recommendation of the Commission, or
 - (B) 180 days after the date of the referral to the Commission, whichever occurs first, the Secretary shall conduct a rulemaking proceeding on the matters proposed in the petition or publish in the Federal Register a statement of reasons for not conducting such proceeding.” 42 U.S.C. § 300aa-14(c)(2).



Entitlement Determination

Vaccine Injury Table

- **To be compensated, one must demonstrate one of the following:**
 - proof of a Vaccine Injury Table condition
 - unless factor unrelated present (cannot be idiopathic)
 - proof of causation
 - proof of significant aggravation
- **Standard of proof -- preponderance of evidence (more likely than not)**
- **Effects of injury must:**
 - lasted greater than 6 months, or
 - have resulted in inpatient hospitalization AND surgical intervention, or
 - death



Addition of Injuries to the Vaccine Injury Table

Vaccine Injury Table

- Injuries can and have been added to the Vaccine Injury Table.
- The Advisory Commission on Childhood Vaccines (ACCV) established “Guiding Principles for Recommending Changes to the Vaccine Injury Table”.



ACCV Guidelines

VICP Vaccine Injury Table

- **The ACCV Guidelines include two basic tenets:**
 - 1) the Table should be scientifically and medically credible; and
 - 2) if there is evidence to either support and/or reject a proposed change, the change should whenever possible, be made to benefit the petitioners.



Overview of Discussion

Vaccine Injury Table

1. Questions posed by petition to add *neurologic injuries* to the Vaccine Injury Table for Influenza vaccines
2. Discussion of the intended purpose of DOJ's "quarterly reports"
3. Discussion of the intended purpose of Vaccine Adverse Event Reporting System (VAERS)
4. Discussion of medical literature regarding multiple sclerosis (MS) and the influenza vaccine
5. Discussion of medical literature in regards to myelitis/transverse myelitis (TM) and the influenza vaccine
6. HHS response to questions
7. Conclusions



Request in Petition

Vaccine Injury Table

- 1st Question/Inquiry

- *“...there appears to be sufficient evidence to amend the VIT to include a "catch all" phrase with respect to adverse health conditions/injuries associated with the flu vaccine. The "catch all" phrase may read as follows: "any adverse neurological disorder or condition." This would preclude having to list each neurological condition separately. The timeline could be set at an appropriately agreed upon time post flu vaccination (e.g., 90 days).”*



Request in Petition

Vaccine Injury Table

- 2nd Question/Inquiry

- *“Should a “catch all” phrase not be used, at a minimum, the VIT should list **Anaphylaxis, Shoulder Injury Related to Vaccine Administration, Vasovagal syncope, multiple sclerosis, Guillain-Barre syndrome, transverse myelitis, and myelitis** (emphasis added) as being associated with the flu vaccine.”*

Response to Petition in Request

Vaccine Injury Table

- Anaphylaxis is already an injury on the Table for all covered vaccines with a few exceptions
 - Is not included as a Table injury for the Hepatitis A, OPV, Hib, Rotavirus and PCV vaccines in the current Table or in the proposed amendments to the Table
 - Is proposed to be added as a Table injury for Influenza, Varicella, Meningococcal and HPV vaccines



Response to Petition in Request (Cont.)

Vaccine Injury Table

- GBS is proposed to be added as injury on the Table for the Seasonal Influenza vaccines
- SIRVA and syncope are proposed to be added as injuries on the Table for all covered vaccines, except oral polio and rotavirus



Questions Posed in the Petition

Vaccine Injury Table

1. Should “any neurologic disorder” be added to the Table as an injury for the influenza vaccine?
2. Should multiple sclerosis and myelitis/transverse myelitis be added to the Table as injuries for the influenza vaccine?



Petition Content

Vaccine Injury Table

- The petition cited two government publications as the source of evidence in determining that there was *“sufficient evidence to amend the VIT”*.
 1. DOJ Quarterly Reports
 - *“A brief perusal of the Department of Justice quarterly reports on vaccine settlement cases reveal the following injuries associated with the flu vaccine.”*
 2. VAERS Reports
 - *“The VAERS reports associated the flu vaccine with **multiple sclerosis, Guillain-Barre Syndrome, transverse myelitis, myelitis** and other adverse health conditions.”*



Purpose of DOJ Quarterly Reports

Vaccine Injury Table

- The “DOJ quarterly report” is the report that DOJ provides and discusses at the quarterly ACCV meetings
<http://www.hrsa.gov/advisorycommittees/childhoodvaccines/meetings.html>.
- This report is made available to the public.



DOJ Quarterly Reports

VICP Vaccine Injury Table

- Information in this report includes:
 - number of filed petitions
 - number of compensated cases (broken down by conceded/non-conceded cases)
 - number of non-compensated/dismissed cases
 - cases appealed to the US court of appeals for the Federal Circuit
 - adjudicated cases by vaccine/injury and time frame from petition filing to settlement filing



Purpose of DOJ Quarterly Reports

VICP Vaccine Injury Table

- The Quarterly ACCV DOJ reports provide updated settlement statistics and factual data
- ***Settlement of a case does not imply-vaccine causation.***



Purpose of DOJ Quarterly Reports

Vaccine Injury Table

- **Conclusions regarding vaccine safety should not be drawn from the fact that cases were settled. Settlements are one way of quickly resolving a petition. Settlements are an agreement between the respondent (the U.S. Department of Health and Human Services, represented by the U.S. Department of Justice) and the petitioner (the person who filed the vaccine injury petition). Settlements are not an admission by the United States or the Secretary of Health and Human Services that the vaccine caused the petitioner's alleged injuries. (Source: VICP website)**



Purpose of DOJ Quarterly Reports

Vaccine Injury Table

- In settled cases, the United States Court of Federal Claims does not determine that the vaccine caused the injury. Petitions may be resolved by settlement for many reasons, including: consideration of prior court decisions; a recognition by both parties that there is a risk of loss in proceeding to a decision by the Court making the certainty of settlement more desirable; a desire by both parties to minimize the time and expense associated with litigating a case to conclusion; and/or a desire by both parties to resolve a case quickly and efficiently. (Source: VICP website)



Purpose of VAERS

Vaccine Injury Table

- The Vaccine Adverse Reporting System (VAERS) is a national safety surveillance program which is co-sponsored by the CDC/FDA.
- Collects and analyzes information from reports of adverse events following vaccination.
- Purpose
 - Detect new, unusual, or rare vaccine adverse events
 - Monitor increases in known adverse events
 - Identify potential patient risk factors for particular types of adverse events
 - Identify vaccine lots with increased numbers or types of reported adverse events
 - Assess the safety of newly licensed vaccines

(Source: CDC website)



Purpose of VAERS

Vaccine Injury Table

- 30,000 reports annually
- 85-90% describe mild events fever, local reactions, episodes of crying or mild irritability
- The remaining (+/-13%), serious adverse events
 - Life-threatening conditions, hospitalizations, permanent disability, death

(Source: CDC website)



Limitations of VAERS

Vaccine Injury Table

- **VAERS is a passive reporting system**
 - Can be submitted by any individual
 - Vary in completeness/quality
 - Lack details/accuracy
- **Underreporting**
- **A report to VAERS does not prove that the identified vaccine(s) caused the adverse event described**
 - Confirms that the reported event occurred after the vaccine was given
 - No proof that the event was caused by the vaccine is required in order for VAERS to accept the report

(Source: CDC website)



Summary of ACCV DOJ Quarterly Reports and VAERS

Vaccine Injury Table

- 1. The ACCV DOJ quarterly reports do not ascribe causality to vaccinations.**
- 2. VAERS reports do not ascribe causality to vaccinations.**



Response to the 1st Request in Petition

Vaccine Injury Table

- Addition of “any adverse neurological disorder or condition” to the VIT for the Influenza vaccination
 - The medical literature does not support that the influenza vaccine causes **ANY** neurological disorder or condition
 - The 2012 IOM (Institute of Medicine) reviewed only a few of the possible neurologic conditions:
 - encephalopathy/encephalitis/seizures/ADEM/TM/Optic neuritis/NMO/MS/MS relapse/GBS/CIDP/Bells Palsy/BN/small fiber neuropathy
 - evidence is inadequate to accept or reject a causal relationship between influenza vaccines and the above conditions



Response to 1st Request in Petition

Vaccine Injury Table

- Addition of “any adverse neurological disorder or condition” to the VIT for the Influenza vaccine
 - Too broad in scope to include ANY neurologic injury
 - The guidelines set forth by the ACCV that “**the Table should be scientifically and medically credible**” would not be met



Response to the 2nd Request in Petition

Vaccine Injury Table

- “the VIT should list Anaphylaxis, Shoulder Injury Related to Vaccine Administration, Vasovagal syncope, multiple sclerosis, Guillain-Barre syndrome, transverse myelitis, and myelitis as being associated with the flu vaccine.”
- Anaphylaxis is currently an injury on the VIT
 - Not currently a Table injury for the Hepatitis A, OPV, HiB, Rotavirus and PCV vaccinations and not proposed to be a Table injury
 - It is proposed to be added to the VIT for Varicella, Influenza, meningococcal and HPV vaccines
- GBS, SIRVA and Vasovagal Syncope are also proposed to be added as injuries for the influenza vaccine



Response to the 2nd Request in Petition

Vaccine Injury Table

- The requested addition of these conditions to the VIT
 - Multiple Sclerosis (MS)
 - MS is the most common autoimmune inflammatory demyelinating disease of the central nervous system (CNS)
 - Myelitis/Transverse Myelitis (TM)
 - Myelitis is a generalized term that implies spinal cord inflammation
 - TM is more specific and implies the position of the spinal cord inflammation (across the width of the spinal cord) and can involve more than one segment of the spinal cord. Symptoms can develop over hours or days in patients in whom there is no evidence of a compressive lesion.



Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- **2012 IOM Report - influenza vaccine/MS**
 - Epidemiologic evidence
 - DeStefano et al. Vaccinations and risk of central nervous system demyelinating diseases in adults. Archives of Neurology 60 (4): 504-509
 - Influenza vaccination does not appear to be associated with an increased risk of MS onset in adults
 - Hernan et al. Recombinant hepatitis B vaccine and the risk of MS: A prospective study. Neurology 63 (5): 838-842
 - Influenza vaccination did not appear to be associated with increased risk of MS onset in adults
 - Flaws with both studies
 - **IOM concluded that it had limited confidence in the epidemiologic evidence based on the 2 studies that lacked validity and precision to assess an association between influenza vaccine and onset of MS in adults**



Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- **Mechanistic evidence**

- Association between influenza vaccine and onset of MS in adults is lacking.

- **Causality conclusion**

- Evidence is inadequate to accept or reject a causal relationship between the influenza vaccine and onset of MS in adults.

Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- **Williamson et al. (Curr Neurol Neurosci Rep 2016 16:36).
Vaccines in Multiple Sclerosis**
 - No substantiation to reports suggesting link to MS and vaccinations
 - Review of multiple studies found no relationship between vaccines and MS
 - Some studies actually showed decreased risk of relapse after MS after certain vaccinations
 - Most studies purported an increased risk of MS or relapse of MS after vaccination have been small case series

Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- **Langer-Gould et al. Vaccines and the risk of MS and other CNS Demyelinating Diseases (JAMA Neurol. 2014;71(12): 1506-13)**
 - Nested case control study which found no long-term association between vaccines and MS or other CNS ADS (acquired demyelinating syndromes)
 - In the nested case-control study, cases of a disease that occur in a defined cohort are identified and, for each, a specified number of matched controls is selected from among those in the cohort who have not developed the disease by the time of disease occurrence in the case (Prev Med. 1994 Sep;23(5):587-90.)

Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- **Williamson et al. (Curr Neurol Neurosci Rep 2016 16:36). Vaccines in Multiple Sclerosis**
 - Concluded that the inactivated influenza vaccine was “the most thoroughly researched vaccine in MS and that it is recommended and considered safe for all MS patients irrespective of treatment”



Multiple Sclerosis (MS) and Influenza Vaccines

Vaccine Injury Table

- Conclusion for MS/Influenza vaccination
 - The literature does not support that the influenza vaccination causes MS.
 - Adding this injury to the Table would not comply with the guideline that the Table should be "scientifically and medically credible."



Myelitis/TM and Influenza Vaccines

Vaccine Injury Table

2012 IOM Report - reviewing transverse myelitis and the influenza vaccination

- **Mechanistic evidence**

- 6 studies used and felt to not provide any evidence beyond temporality
- Influenza infection, rarely, has been associated with TM (Treanor, 2010)
- **Mechanistic evidence weak regarding an association between influenza vaccination and TM based on knowledge about the natural infection**



Myelitis/TM and Influenza Vaccines

Vaccine Injury Table

- **Epidemiologic evidence**
 - Vellozzi 2009 (Safety of trivalent inactivated influenza vaccines in adults. Vaccine 27(15):2114-2120)- not considered because data was provided from passive surveillance system and lacked unvaccinated comparison population
 - **Concluded that epidemiologic evidence is insufficient or absent to assess an association between flu vaccine and TM**
- **Concluded that the evidence is inadequate to accept or reject a causal relationship between influenza and TM.**



Myelitis/TM and Influenza Vaccines

Vaccine Injury Table

- Conclusion for MS/Influenza vaccination
 - The medical community/literature does not support that the influenza vaccination causes myelitis/transverse myelitis
 - Adding this injury to the Table would not comply with the guideline that the Table should be "scientifically and medically credible."



ADEM and Influenza Vaccine

Vaccine Injury Table

- **2012 IOM Report - Acute disseminated encephalomyelitis (ADEM) and Influenza vaccine**
 - Epidemiologic Evidence
 - The epidemiologic evidence is insufficient or absent to assess an association between influenza and ADEM.
 - Mechanistic evidence
 - The committee assessed the mechanistic evidence regarding an association between influenza vaccine and ADEM as weak based on knowledge about the natural infection.



ADEM and Influenza Vaccine

Vaccine Injury Table

- 2012 IOM – ADEM and influenza vaccine
 - Causality Conclusion
 - The evidence is inadequate to accept or reject a causal relationship between influenza vaccine and ADEM.



ADEM and Influenza Vaccine

Vaccine Injury Table

- Conclusion for ADEM/Influenza vaccine
 - The medical community/literature does not support that the influenza vaccination causes ADEM.
 - Adding this injury to the Table would not comply with the guideline that the Table should be "scientifically and medically credible."



Options for ACCV

Vaccine Injury Table

1. Add ALL neurologic injuries to the Table
2. Add MS to the Table
3. Add myelitis/transverse myelitis to the Table
4. Do not add any of the above to the Table



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