

**TABLE: Summary of Causality Conclusions**

| Vaccine                  | Adverse Event  | Causality Conclusion                  |
|--------------------------|--|---------------------------------------|
| Varicella                | Disseminated varicella infection (widespread chickenpox rash shortly after vaccination)  | Convincingly Supports                 |
| Varicella                | Disseminated varicella infection with subsequent infection resulting in pneumonia, meningitis, or hepatitis                                | Convincingly Supports <sup>a</sup>    |
| Varicella                | Vaccine strain viral reactivation (appearance of chickenpox rash months to years after vaccination)  | Convincingly Supports                 |
| Varicella                | Vaccine strain viral reactivation with subsequent infection resulting in meningitis or encephalitis (inflammation of the brain)            | Convincingly Supports                 |
| MMR                      | Measles inclusion body encephalitis  | Convincingly Supports <sup>a, b</sup> |
| MMR                      | Febrile seizures (a type of seizure that occurs in association with fever and is generally regarded as benign)                             | Convincingly Supports                 |
| MMR                      | Anaphylaxis (a very rare but sudden allergic reaction)   | Convincingly Supports                 |
| Varicella                | Anaphylaxis  | Convincingly Supports                 |
| Influenza                | Anaphylaxis  | Convincingly Supports                 |
| Hepatitis B              | Anaphylaxis  | Convincingly Supports <sup>c</sup>    |
| Tetanus Toxoid           | Anaphylaxis  | Convincingly Supports                 |
| Meningococcal            | Anaphylaxis  | Convincingly Supports                 |
| Injection-Related Event  | Deltoid bursitis (frozen shoulder, characterized by shoulder pain and loss of motion)  | Convincingly Supports                 |
| Injection-Related Event  | Syncope (fainting)   | Convincingly Supports                 |
| HPV                      | Anaphylaxis  | Favors Acceptance                     |
| MMR                      | Transient arthralgia (temporary joint pain) in women   | Favors Acceptance <sup>d</sup>        |
| MMR                      | Transient arthralgia in children   | Favors Acceptance                     |
| Influenza                | Oculorespiratory syndrome (a mild and temporary syndrome characterized by conjunctivitis, facial swelling, and upper respiratory symptoms) | Favors Acceptance <sup>e</sup>        |
| MMR                      | Autism   | Favors Rejection                      |
| Influenza                | Inactivated influenza vaccine and Bell's palsy (weakness or paralysis of the facial nerve)   | Favors Rejection                      |
| Influenza                | Inactivated influenza vaccine and asthma exacerbation or reactive airway disease episodes in children and adults                           | Favors Rejection                      |
| MMR                      | Type 1 diabetes  | Favors Rejection                      |
| DT, TT, or aP containing | Type 1 diabetes  | Favors Rejection                      |

<sup>a</sup> The committee attributes causation to individuals with demonstrated immunodeficiencies.

<sup>b</sup> The committee attributes causation to the measles component of the vaccine.

<sup>c</sup> The committee attributes causation to yeast-sensitive individuals.

<sup>d</sup> The committee attributes causation to the rubella component of the vaccine.

<sup>e</sup> The committee attributes causation to two particular vaccines used in three particular years in Canada.

All other causality conclusions are the evidence is inadequate to accept or reject a causal relationship.

SOURCE: Adverse Effects of Vaccines: Evidence and Causality