SAFETY UPDATE OF HPV VACCINE AND ADVERSE REACTIONS

Report Extract from:
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1. Since licensure in 2006, over 270 million doses of the HPV vaccine have been distributed. Three Human papilloma virus (HPV) vaccines (Cervarix®, Gardasil®, and Gardasil®9) have been developed and approved in more than 100 countries.

2. HPV vaccination is safe and broadly cost-effective and produces long-term public health benefits. The WHO – Global Advisory Committee for Vaccine Safety (GACVS) first reviewed HPV vaccine safety data in 2007 and subsequently in 2008, 2009, 2013, 2014, and 2015. The risk of allergic reaction has been characterized as approximately 1.7 cases per million doses, and syncope was established as a common anxiety or stress-related reaction to the injection. No other adverse reactions have been identified and GACVS considers HPV vaccines to be extremely safe.

3. In 2017, an online publication from France suggesting an increased risk of Guillain-Barré syndrome (GBS), a large self-controlled case-series study from the UK was conducted, based on a population where 10.4 million doses were administered. This most recent study found no significant increased risk for GBS after any dose of vaccine, in any of several risk periods assessed or for either vaccine brand. In addition, GACVS found new studies assessing other safety concerns of HPV vaccines from the US and Denmark. These studies included examination of specific outcomes that included complex regional pain syndrome (CRPS), postural orthostatic tachycardia syndrome (POTS), premature ovarian insufficiency, primary ovarian failure, and a further look at the risk of venous thromboembolism. With now large population level data from several countries, the GACVS saw no new evidence for a causal association between HPV vaccine and those conditions.

4. As HPV vaccine is often administered during potential childbearing years it is important to establish the safety profile in pregnant women when inadvertent administration occurs. To date no safety concerns have arisen during the pre-licensure clinical trials or in post-licensure surveillance. No adverse obstetric, birth or structural abnormality outcomes were observed. Inadvertent administration of HPV vaccine during pregnancy has no known adverse outcomes in either mother or infant.

5. In June 2017, new data from Japan that assessed cases with diverse symptoms, including pain and motor dysfunction, were presented to GACVS. The cases were identified from a nationwide epidemiological survey involving multiple hospital medical departments of various disciplines including pain, neurology, rheumatology, pediatrics and psychiatry/psychosomatic medicine. These complex syndromes manifested in both sexes, although were more common in girls, and occurred in both vaccinated and unvaccinated individuals. GACVS concluded that since their last review, there is still no evidence to suggest a causal association between HPV vaccine and CRPS, POTS or the diverse symptoms that include pain and motor dysfunction.

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6. In 2017, the WHO commissioned a systematic review of serious adverse events following HPV vaccines. However, despite the extensive safety data available for this vaccine, attention has continued to focus on spurious case reports and unsubstantiated allegations.

7. The ongoing unsubstantiated allegations have a demonstrable negative impact on vaccine coverage in a growing number of countries. To provide evidence-based decision-making, it is important to ensure that immunization policy-makers and other stakeholders have ready access to articulate summaries of the vaccine safety information. One concrete step will be to update the HPV adverse reaction rate sheet, to reflect the most recent evidence available.

8. Where HPV vaccination programs have been implemented effectively, the benefits are already very apparent. Several countries that have introduced HPV vaccine into their immunization programme have reported a 50% decrease in the incidence rate of uterine cervix precancerous lesions among younger women.

9. In contrast, the mortality rate from cervical cancer in Japan, where HPV vaccination is not proactively recommended, increased by 3.4% from 1995 to 2005 and is expected to increase by 5.9% from 2005 to 2015. This acceleration in disease burden is particularly evident among women aged 15–44 years. Ten years after introduction, global HPV vaccine uptake remains slow, and the countries that are most at risk for cervical cancer are those least likely to have introduced the vaccine. Since licensure of HPV vaccines, GACVS has found no new adverse events of concern based on many very large, high quality studies.