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HPV vaccination coverage drop: common denominators

Successful childhood immunization programs reduce the burden of vaccine-preventable diseases, but also may reduce the perceived need for some vaccines. In the context of less disease risk, the public is also more prone to focus on the risk of the vaccines, seeding vaccine hesitancy and sometimes refusal.(1,2) (Figure 1). HPV vaccination stands out from other vaccination programs because of the target age group (adolescents) and because of the long progression time between viral exposure and serious disease, and consequently between vaccination and reduction of cancer. The impact of HPV vaccination is not as immediately visible as with measles or pertussis vaccination. (3,4).

Table 1 shows that after the introduction of HPV vaccination in Colombia, Denmark, Ireland and Japan, relatively good coverage rates were obtained. However, a steep drop occurred very rapidly following confidence crises. A number of stakeholders were identified as having an impact on vaccination confidence and coverage: organized 'anti-vaccine' activities/groups, the general public, medical professionals and scientists, the Government – Ministry of Health, academic researchers, and vaccine manufacturers (Figures 2-3).

during vaccine crises, healthcare workers can be informed by the same channels as vaccinees or their parents, which include a mix of valid as well as misinformation

Organized 'anti-vaccine' activities/groups were effective in attracting public attention, supported by movies, websites, social media and newspaper articles showing images and stories of girls believed to have been negatively affected by the vaccine. These activist groups were well connected via internet and shared information rapidly, including references to a limited number of scientific papers of questionable quality, some even deemed to be fraudulent.

While **the general public** remained positive about the importance of infant vaccination as well as the safety and effectiveness of these vaccines, there was a drop in HPV coverage(5).

The vaccinators are considered as the main source of information, advice and recommendation for vaccinees and/or their parents. Unfortunately, during vaccine crises, healthcare workers can be informed by the same channels as vaccinees or their parents, which include a mix of valid as well as misinformation. Some healthcare workers became afraid that vaccination could cause harm, which was observed in Ireland and discussed at the HPV Control and Prevention board meeting in Dublin(6). Adequate and tailored training and rapid response by the ministry of health resulted in improved confidence and motivated vaccinators.

Despite extensive data on the safety of HPV vaccines, there is a group of **medical professionals** and scientists, active in Japan, Denmark, and Colom-

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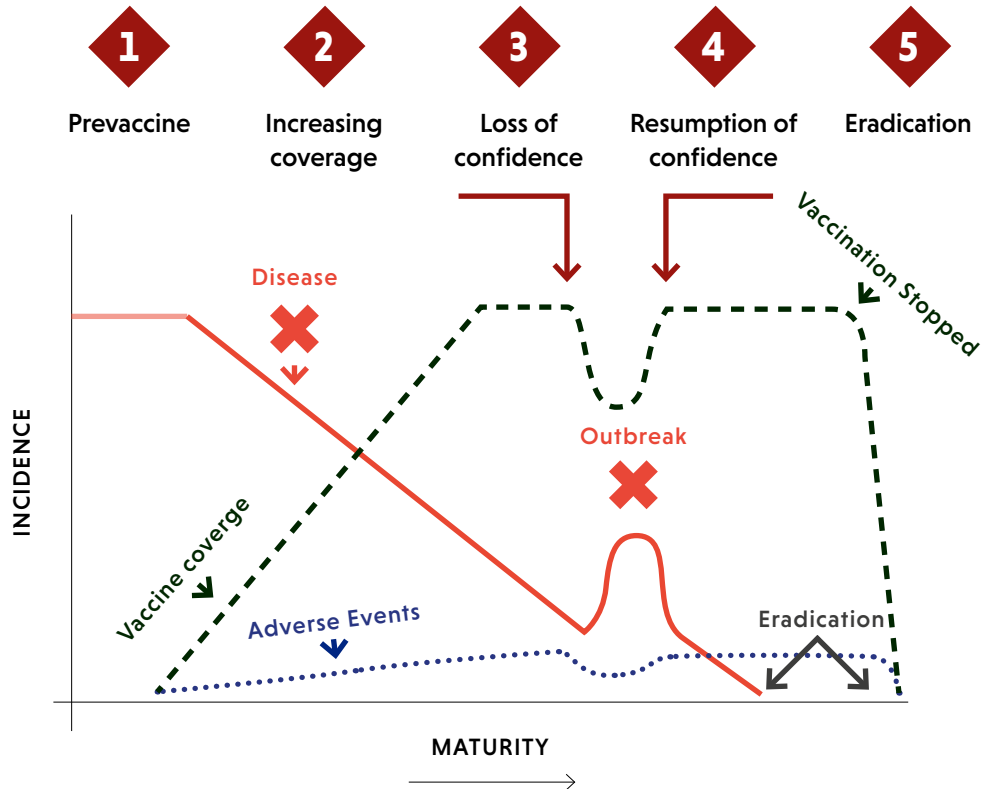
Table 1

HPV vaccination drop in a selected number of countries

COUNTRY	Pre-crisis HPV vaccination coverage rate % (vaccination year)	Post-crisis HPV vaccination coverage rate % (vaccination year)
Colombia (last dose)	88% (2012)	5% (2016)
Denmark (first dose)	>90% (2012)	44% (2015)
Japan (last dose)	~70% (2013)	0.6% (2015)
Ireland (last dose)	86.9% (2013-2014)	49.4% (2016-2017)

Figure 1

HPV prevalence estimates in women with normal cytology by age group

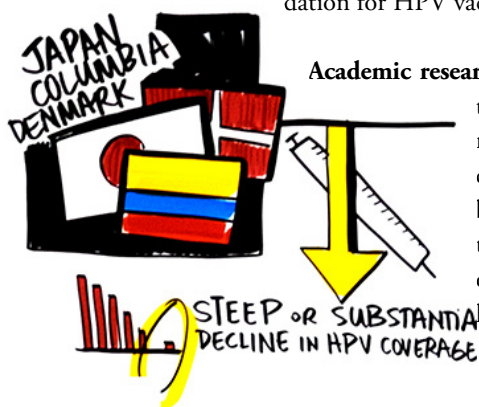


bia, who continue to express doubt about the safety of HPV vaccines, mainly based on case reports. Good epidemiological studies, to show the difference between temporal association (i.e. coincidence) and causality, clearly need more attention in the basic medical curricula and in-service training.

It is difficult to discern causality from coincidence, even for health care providers. Expert groups should analyze the full picture and disseminate their findings widely

Another major stakeholder is the **Government – Ministry of Health**, responsible for the implementation and monitoring of the immunization program. None of the countries mentioned above had an existing communication plan providing guidelines on how to prevent or respond to a crisis. Colombia and Ireland continued to promote the vaccination. In Denmark, the government continued to strongly recommend vaccination but public funding was made available to set up clinics for vaccinated girls with adverse events and conduct research on potential safety issues. This could have given the impression that the government believed the false allegations of causality. In Japan, the Ministry of Health, Labour and Welfare suspended the proactive recommendation for HPV vaccination.

Figure 2 ▼

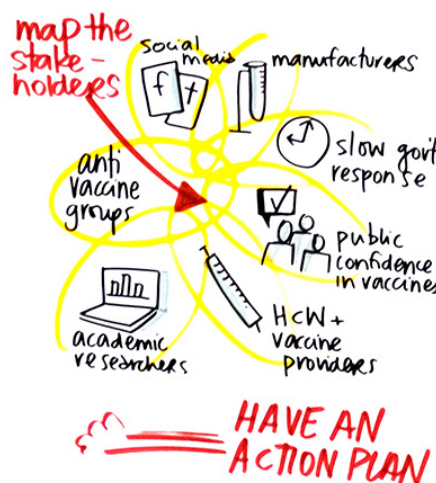


Academic researchers also play an important role in the debate during a crisis. In the public domain, two groups can be identified: 1) the group that defends the vaccine, often accused of having links with industry and, 2)

tion of a direct causal link, further deteriorating public confidence in the vaccine.

Major lessons can be learnt from these countries. In order to establish and maintain effective and robust vaccination programs **there is no room for complacency**. Having a good coverage today is no guarantee for success tomorrow. In case of issues arising, one should be prepared to respond as soon as possible, optimally with a safety and communication plan. Equally important, is to ensure that all healthcare workers are well informed and trained to be able to address concerns and prevent or mitigate crises. ■

Figure 3 ▼



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