Human Papillomavirus Prevention and Control Board/LSHTM Vaccine Confidence Project

Building trust, managing risk:

vaccine confidence and human papillomavirus vaccination

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THE VACCINE CONFIDENCE PROJECT

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Objectives

- To examine challenges in HPV vaccine introduction, including the degree of preparedness of all concerned parties to introduce a vaccine into pre-adolescent and adolescent populations
- To review country experiences of HPV vaccine introduction and perspectives on overcoming challenges
- To explore the ramifications of adolescence and health
- To look at monitoring public confidence in immunization programmes (the Vaccine Confidence Project)
- To discuss the role and monitoring of the media and listening to social media
- To consider ways of engaging and communicating with different audiences, including the management of misperceptions and misinformation and overcoming the consequent vaccine hesitancy

Context

- Programmes in 74 countries, areas or territories, have been introduced through immunization programmes with a variety of different approaches, including school-based programmes, and generally high coverage rates and low drop out rates in high-income countries
- Vaccination programmes have been extended to boys in seven countries
- Different dosage schedules are being implemented, from 3 doses over 12 months to 2 doses over 6 months; even a 1-dose schedule is being explored for low- and middle-income countries (LMICs)
- A nonavalent vaccine has recently been licensed.
- Declines are being seen in prevalence rates of HPV and precancerous cervical abnormalities across a range of settings and coverage rates
- Suggestive evidence indicates that the vaccination programmes are generating herd immunity
- Concerns about HPV vaccine safety have been manifest and have persisted in some countries, leading to and dramatic drops in uptake rates (e.g. in Colombia, Denmark and Japan) and even cessation of vaccination programmes
- LMICs started HPV vaccination later than high-income countries but many are supported by the GAVI Alliance; projections suggest an uptake similar to that of rotavirus vaccine

Regional and country experiences and examples

- Speakers highlighted cultural differences (e.g. no general practitioner system in Japan), transnational influences (e.g. common languages), international links (rapid global dissemination of information by Internet and social media) and the emergence of alternative facts and a growing distrust of experts, lack of interest (little if any research around HPV vaccination in eastern Europe), and insularity (lack of intergovernmental cooperation and of sharing of experiences)
- **United Nations:** multiagency groups exist and are active (e.g. in Mongolia)
- **WHO** is collaborating with other UN partners and has a global framework for accelerated action programme on adolescent health in support of the UN Secretary-General's Global Strategy for Women's, Children's and Adolescents' Health (2016-2030); it has created an HPV Vaccine Introduction Clearing House
- **WHO Regional Office for Europe** has launched an intersectoral education pilot project in vaccines, developed guidelines for target group research, created a library on vaccination and trust, formulated stakeholder relation strategies, and issued mitigation guidance to deal with vocal vaccine deniers.
- **Europe (EU/EEA):** Across this region, populations exhibit the lowest confidence in vaccine safety in the world and express major concerns about safety, a lack of information and morality issues (such as sexual activity of adolescents), with resultant mistrust leading to uncertainty (vaccine hesitancy).
- **European Centre for Disease Control and Prevention** (working on epidemic intelligence) and **European Medicines Agency** (real-time global media monitoring and shaping responses and messages) are active contributors to the work on HPV vaccination. ECDC is piloting the European Commission's MEDISYS, a media monitoring system providing event-based surveillance, to monitor media reports on HPV. EMA's pilot work shows utility for analysing concerns and generating responses and talking points at the EU level

Regional and country experiences and examples (contd)

- **Australia**: very positive environment for HPV vaccination programme, with political commitment, rigorous framework for policy-making, programme design and implementation, solid research basis and sustained impact studies, transparent reporting, proactive responses to safety concerns and communication, considerable amounts of advocacy (at parental and community levels) and strongly supportive media messaging, and “people” – a dedicated group of motivated and influential people.
- **Belgium (Flanders)**: a school-based programme for girls began in 2010 and is free of charge; coverage is high (and higher than in Wallonia) and vaccination data are collated electronically. There is no follow-up of circulating rumours on Internet and social media.
- **Chile**: programme introduced in 2014 for 9-year-old girls with catch-up for 9-12 year-old girls, with two doses of quadrivalent vaccine 12 months apart passive surveillance for adverse effects, but few seen. Antivaccine groups are active but damage to the vaccination programme has not been as great as in **Colombia**, where preparation for vaccine introduction was rushed and extensive media coverage of medical conditions allegedly related to vaccination has led to calls for the cessation of the HPV vaccination programme
- **Denmark**: the country has a high incidence of cervical cancer. HPV vaccine for girls was introduced in 2008, with a subsequent extensive catch-up programme and a coverage rate of more than 90%. A report of seven adverse reactions triggered an official investigation which only published its findings after 15 months; that and other studies found no causal relationship with HPV vaccine but more cases and a critical TV programme led to adverse media attention, increased mistrust, the creation of 5 specialized clinics and funding for research. The Health Authority is launching an information campaign.

Regional and country experiences and examples (contd)

- **Netherlands**: there is a low perceived risk of HPV infection and cervical cancer in the country. Free HPV vaccination of girls was introduced in 2010 with a 2-dose bivalent vaccine. Several critical TV programmes and media comment in 2016 have increased ambivalent parental attitudes and prompted the development of an online information tool
- **Japan**: programme for girls initially had good uptake but plummeted after videos showing alleged side effects of HPV vaccine were posted on social media and broadcast on television, with rates falling to less than 1%. Health authorities' investigation found no plausible temporal relation between reported symptoms and HPV vaccination. The situation was compounded by lack of appropriate health care for adolescents, confusion about menstrual problems in adolescent girls, poor health education and knowledge of cervical cancer, and low priority of women's health. Despite available data showing no increase in incidence of AEFIs in vaccinated and unvaccinated girls, the Government did not recommend the vaccination programme. There is concern that criticism of anti-vaccine claims from an investigative journalist resulted in legal action
- **Mongolia**: the country has very high rates of cervical cancer and STIs, including HPV infection. The HPV vaccine was introduced in a "pilot introduction" in 2012 with little public preparation and unclear objectives; for the first time, there has been opposition to a vaccine, initiated by an external NGO but supported by some health professionals. The health ministry was unable to provide any advocacy, and the Government suspended the programme
- **USA**: has innovative approaches to improving the quality of healthcare provider-adolescent/children interactions – examples included the use of announcements, motivational statements, and coalitions of organizations resulting in synergies. There are multiple free online tools available.

Lessons learned

- Political will is essential to the introduction and maintenance of vaccination programmes
- Introduction of a programme needs good preparation, well in advance of its initiation, with engagement of all concerned parties, including community health workers, teachers and parents and with material suitable for each targeted group (including hard-to-reach populations), taking into consideration the country context
- Uncertainty – and defining what is known and what is not known – is a central issue in vaccine hesitancy. Those who deny the value of vaccines cover a spectrum of groups, from concerned parents and some religious groups to litigious lawyers and vaccine deniers
- The value of feedback to healthcare providers about immunization information (e.g. CDC's Immunization Information Systems in USA, which collects public and private sector data), electronic records and reminder/recall systems was noted, as was the value of quality improvement visits for physicians and incentives
- Multiple, valuable tools are available, many online and free
- School-based systems offer many advantages and conveniences but have limitations: some schools such as religious schools are not covered and children outside the school system are missed, and there is no contact with parents

Lessons learned (continued)

- Terminology: refer to a “safety plan” rather than crisis action plan; avoid “routine” and “pilot” (unless programmes are experimental)
- Traditional media are still an important source of information and are often vibrant and independent (e.g. in Pakistan)
- Social media (“the new sheriff in town”) reflect real world concerns and may be able to influence themImportance of social listening techniques, identification of main influencers, categorization of concerns, as aids to strategy development; also work of institutions such as EMA and ECDC, including real-time monitoring of epidemiological intelligence
- Rumours of possible side effects of HPV vaccination need rapid, transparent, coherent and consistent responses, with one message but several voices and appropriate “tone” and language
- Rephrase messages to underline the role of HPV vaccine in the prevention of cancer in both genders (as for hepatitis B vaccine) rather than prevention of STIs, and work on messaging to convince parents emotionally why their children need vaccines

Lessons learned (continued)

- Web analytics, drawing in multidisciplinary teams, is a powerful tool that may serve public health but face heavy burdens at present in terms of not only translation of source materials but keywording of data
- The Vaccine Safety Network – wide coverage (geographically and linguistically) – is working towards consistency and tailoring of outputs; it is a valuable support with high-quality information especially for HCPs and may be useful in mapping hesitancy in future years
- Support of vaccine programmes from manufacturers should be indirect
- Adolescent health attracts low levels of investment despite a high benefit-cost ratio for a package of physical, mental and sexual health; WHO and its UN partners have issued guidance for accelerated action on adolescent health and developed costing tools
- Need to licence vaccines for both boys and girls (gender-neutral)

Issues and challenges

- Decision about when to start HPV vaccination (9 years or later?) and on dosing schedules
- Training of qualified and future health care professionals (including doctors including paediatricians, pharmacists, nurses and midwives) about HPV needs to take into consideration the consequences (cancer) in adulthood of infection in youth and about need to introduce HPV vaccine before onset of sexual activity. Questions were raised about media training for HCPs (including who should or could do it).
- Adolescent health: how to raise profile, recognition of importance of prevention of infections that have fatal consequences many years on, how to reach older children, adolescents (as well as pre-adolescents and late childhood) and adults about the value of vaccination; also issue of length of time of consultation between HCP and adolescent/parent
- Many symptoms reported as being associated with HPV vaccine in adolescent girls are often seen unvaccinated girls and some of those who report them had experienced symptoms and different health-seeking behaviours than matched girls - (background data on rare diseases in pre-immunization period is helpful)
- Doctor-adolescent/parent relationships – trust, attitudes, discomfort, access for doctors to accurate and timely information are key elements

Issues and challenges (continued)

- How to find and identify sources of reliable information – from traditional media to Internet and social media of various kinds – but also stressed was the importance of personal contact in conveying information about vaccines and vaccine safety
- How to ensure that reliable information is available, trusted and read; also how to counter and/or retract bad science; how to enhance trust, avoid special interests, conflict etc as well as getting tone and language correct
- Rapid follow up of and reaction to rumours, and need to be proactive rather than reactive
- Messaging: how to connect with emotional as opposed to rational responses, and how to convince politicians who may prefer to respond to a public emotional perception, but many health communication initiatives reportedly have failed
- Understanding the motivation of and techniques used by vocal vaccine deniers and individuals will help to be proactive in communicating sound information about HPV vaccination, but understanding of concerns of parents and adolescents must be acknowledged and handled with sensitivity
- Language and tone: vital for conveying messages, but also translation represents a heavy burden for monitors of global media

Issues and challenges (continued)

- Cultural and transnational differences, as well as social experiences of public health problems (e.g. blood scandals, and problems with other vaccines)
- Debate about responsibilities of industry, from countering rumours to sharing pharmacovigilance data; divergent views about role of industry in raising awareness about vaccines and vaccination
- Clear communication with the pharmaceutical industry, with defined boundaries, could help countries launch programmes and respond to signals
- LMICs face difficulties in moving beyond small exploratory programmes
- Value and effectiveness of legislation mandating vaccination (different views in different countries and they can change with time)

The way forward

- Facilitate governments in seeking advice and guidance about vaccination programmes, and encourage the creation of a central contact point and an expert group that takes the lead and communicates at country level
- Policy formulation by countries considering introduction of HPV vaccination should examine vaccination of pre-adolescents
- Both high-income and low- and middle-income countries would benefit by learning from other countries' experiences
- Tailor actions to local and national circumstances
- Increase collaboration between WHO, ECDC and other national and international agencies on policies, standards, tools and guidance
- Move from discussion of tactics to consideration of health systems, with more work on implementation science, including development and application of costing tools
- Devise ways to support medico-scientific staff who advise politicians in low- and middle-income countries in taking vaccine decisions
- Check-list for countries' safety plan – to be developed
- Review vaccination and catch-up campaigns to identify programme fatigue and need for renewal of impetus

The way forward (continued)

- Further work by EMA, ECDC and the Vaccine Safety Network on monitoring, analysis and formulating responses about vaccine hesitancy, confidence and removing uncertainties
- Data on AEFI need to be interpreted and communicated well
- Continue to develop the Vaccine Safety Network, expanding its coverage, promoting it as a source of reliable information, ensuring consistency and tailoring output
- More work on devising new ways of proactively conveying information about vaccine safety as well as health economic data comparing prevention of HPV infection with death from cervical cancer
- For responses to rumours and signals, monitor and identify their content and nature and the concerns of those involved, decide on how and who to respond, select appropriate channels of communication, and act rapidly; establish formal and informal networks
- Involve and engage communication specialists in as early as possible
- Vaccine teams should include a journalist and role of media officers should be more broadly recognized; with journalists: links need to be established and nurtured, trust needs to be earned (takes time). Journalists should not rely on one single source of information, and should not be seen simply as PR agents for public health. Experts need to understand journalists' requirements (e.g. a new angle)

The way forward (continued)

- Ensure that education systems prepare young people for decisions about vaccination and the value of vaccination
- Actions and strategies need to be devised to address the power of videos and visual images (including television) that convey wrong or distorted information
- Check-list for countries' safety plan – to be developed
- Provide good evidence on vaccine and safety and creation of strategies and action plans, including emphasis on benefits on HPV and indeed vaccination in general, with proactive advocacy and approaches to countering vaccine deniers' messages