

# Barriers in HPV vaccination and cervical screening programmes

Antwerp, Belgium

27-28 June 2016



[www.hpvboard.org](http://www.hpvboard.org)

# Objectives of the meeting

1. To review cultural, infrastructural and financial barriers that impact implementation of vaccination and screening programmes.
2. To review the adverse events profile following HPV vaccination.
3. To update the points of view regarding safety issues and describe new developments.
4. To discuss the impact of safety issues and crises in an international perspective.
5. To review factors impacting adherence to cervical screening programmes.
6. To learn from country initiatives in HPV vaccine safety monitoring and HPV screening adherence.
7. To propose strategies to counter vaccination and screening hesitancy and to build public confidence in the HPV prevention programs.
8. To discuss a new approach to implement HPV prevention and control: HPV-Faster.



# Global Advisory Committee on Vaccine Safety (GACVS): review of HPV vaccine safety

- Early: routine pharmacovigilance
- Anaphylaxis signal not confirmed
- Syncope recommendations strengthened
- Psychogenic illness (Australia) to be routinely considered
- Vaccine Adverse Event Reporting System (VAERS) and Vaccine Safety Datalink (VSD) reports
- Complex regional pain syndrome (CRPS) (Japan) reviewed
- Aluminum safety (US Food & Drug Association)
- Guillain Barré (GBS), multiple sclerosis (MS) and other autoimmune diseases (France, only GBS increased, 1/100,000)
- HPV DNA fragments
- Postural Orthostatic Tachycardia Syndrome (POTS), (Denmark, European Medicines Agency)
- Primary Ovarian Failure
- Immunization anxiety reactions



## GACVS summary

- Profile remained reassuring throughout review.
- No major issues.
- Policy decisions based of weak evidence may result in real harm to those not vaccinated.
- Continued pharmacovigilance remains important to gather best possible evidence.



# Review of initial HPV CT safety data

- (Rambout, CMAJ 2007; Agorastos, Vaccine 2009; Lu, BMC Inf Dis 2011) systematic reviews: pain increased only, not serious adverse events (SAEs).
- 9 valent vaccine: no increased reactogenicity, few related SAEs, swelling if co-administered.
- Numerous papers on HPV vax + ASIA (Autoimmune/inflammatory Syndrome Induced by Adjuvants, artificial definition); limited data available, from this evidence no causal relationship.



## Finland, background rates

- POTS - present in different age groups, also frequent in elderly
  - Before vaccination strong peak of POTS:
    - Increased awareness?
    - Preferred use of ICD-10 code?
  - Before / after vaccination:
    - GBS fluctuates as before
    - POTS strong decrease
    - CFS stays the same
- Conclusion: Use registers with caution, especially in case of non-specific diseases



## Discussion

- Falsifiable issues can be tackled, point out lack of evidence, recommend to increase state of knowledge
- Non-falsifiable issues need to be tackled at a local level; good communication, talk to parents, local containment.



# Vaccine safety – mortality after HPV vaccination observed in RCTs

Girls: perfect balance in mortality risk between vaccinated and control

Older women (25-55):

- Significantly higher mortality risk in vaccinated.
- After careful review of data (one less in vax/two more in control) still higher mortality, no longer significant. Deaths not vax-related: e.g. 1 homicide, 2 suicides, no biological feasibility.
- Recruitment bias? Statistical hiccup (statistical relation not necessarily causal relation: chance finding)

**Needs thoughtful communication?**





# The state of vaccine confidence

- Anti-vaccination lobby is of all ages
- Arguments against vaccination more or less still the same
- Not necessarily about vax, broader (societal) issues
- With social media the message spreads more quickly
- More or less same arguments in parents, vaccinees and health care workers (HCW) (e.g. France, 50% of HCW hesitated to give vaccine)



## Vaccine hesitancy, measurement

- Different metrics
- Slow data:
  - Epi / systematic review / qualitative data
- Fast data:
  - Survey data / media tracking
- Provides hot topics concerning HPV vax



## Vaccine hesitancy, strategy

- Identify if/where vaccine hesitancy exists
- Monitor public confidence
- Use context-specific, evidence-based strategies
- Plan well in advance
- Communicate with all involved (vaccinnee, parents, teachers, HCW, including pharmacists)



## Vaccine hesitancy, communication

- Be credible
- Express empathy, show respect, no criticism
- Be the first
- Be accurate and transparent
- Promote action
- Use every opportunity
- Engage parents who do vaccinate (advocates)



## Discussion on vaccine hesitancy

- SWAT team to deal with vax issues, from money now invested in AEFIs.
- Extra effort in medical training, learn to deal with hesitancy, tackle difficult conversations.
- Because of distrust in investigators, doctors, government, independent (country-specific) persons are needed to give good info.



# Scotland

## Success story:

- High coverage, also in deprived population
- Good AE monitoring system
- Effectiveness against high-risk types shown
- Herd protection shown
- Effectiveness against CIN shown



## Scotland (cont'd)

### Success story:

- Local implementation group
- School-based program
- Broad media coverage
- Road show
- Cancer vaccine (avoid stigma of 'sexual vaccine')
- Jade Goody effect (death of a celebrity)



## India

- 65% full vaccination
- Cervical cancer most frequent female cancer, 1/3 of global number of cervical cancer cases
- 2008 vaccines introduced in observational study, 2010 5 deaths, 2012 study suspended





# Japan

- More than 70% uptake before crisis
- Despite community-based program
- Threats:
  - Poor risk communication
  - Poor epi data
  - Well organized anti-vaccination movement
  - Unrestrained media (all anti-vaccination)



## UK

- Started early to investigate attitudes
- Investigated optimal campaign
- All-out media campaign
- Separate messages for separate groups
- For a fraction of the program budget (1-3%)
- Documentation for HCW and teachers



## US

- Recommendations, all 3 vaccines, 9vHPV mostly used.
- Coverage (40 % 3d) < dTpa and MenACWY.
- Drivers not vaccinating: lack of knowledge, not needed, safety, not recommended, not sexually active.
- Strategies for improving rates: education of providers.



## US (cont'd)

- Safety monitoring (VAERS, VSD).
- Signals not confirmed.
- VAERS: Can lead to misuse of publicly available data.



## Belgium, Flanders

- Info leaflet well tested.
- Started with Gardasil 3dose, now Cervarix 2dose
- High and stable uptake > 83%.
- Vaccinnet: vaccine database, extra tool for communication with providers.



## Romania

- Low budget, high no. of cervical cancer cases.
- HPV vaccination, no communication, no uptake, <5%.
- Negative media coverage.
- Incomplete knowledge in HCW/GPs
- Limited knowledge in young adults.



# HPV vaccination in 45 Low and Middle-Income Countries (LMICs)

Factors for success:

- Preparation (including staffing)
- Involvement Ministry of Education
- Communication
- School-based delivery

Up to 90% coverage.



# HPV vaccination in 45 Low and Middle-Income Countries (LMICs)

## Pitfalls:

- Lack of political commitment.
- Decreased momentum to introduce HPV vaccination nationally.
- Not engaging with local community leaders.
- Lack of crisis communication plan, leading to perpetuated rumors.





## Denmark

- 2007 vaccination registry, 2008 Gardasil GP-based, 2016 Cervarix.
- Impact shown on lesions, both in vaccinated and unvaccinated.
- Decline in genital warts.
- In 2016 dramatic fall in coverage, due to POTS
- Normal no. of SAE but high impact.
- Sources of info: Facebook, MetroExpress (free and widely disseminated newspaper).



## Denmark (cont'd)

- MetroExpress: special HPV vaccine page.
- European Medicines Agency report: perceived as “paid by industry”.
- Beware of Conflict of Interest, public-private.
- High number of girls at higher age at vaccination (catch-up).
- Symptoms before having vax in case-control
- Vaccination as trigger for Body Distress Syndrome?



## Combined SWOT - strenghts

- Coordination / communication / local buy-in / Immunisation program (see Scotland).
- HIV experience (sexuality) / many institutions to spread awareness / TV – social media (Ind)
- Before crisis high uptake (J).
- Impact demonstrated, no link to promiscuity (DK).
- School-based (B/S); Vaccinnet (BE).



## Combined SWOT - weaknesses

- Better catch-up uptake – GP service not effective (Sco).
- Negative perception safety / no advocates – champions / sexuality social taboo / lack of adolescent-friendly platforms & clinics (Ind).
- Poor risk communication, decision to suspend not based on evidence, poor epi data, no vaccination registry, no data linkage (J).
- Unable to address safety concerns (DK).
- Undervaccinated religious groups (BE).



## Combined SWOT - opportunities

- Project and program management / collaboration (Scotland).
- Other platforms / existing platforms HIV / advocacy with media & community/ conversations on cervical cancer initiated (India).
- Concerns for cancer (DK).
- Political commitment of government (BE).



## Combined SWOT - threats

- Adverse events / anti-vaccination campaigners (Sco).
- 'Association' with HIV / target group suggests 'control of fertility' / active anti-vaccination lobby (Ind).
- Well-organised anti-vaccination lobby, non-responsive government (J).
- Concerns/case stories are treated as evidence (DK).
- Rumours in media (BE).



## E-learning

- Module on vaccine safety started after crisis in Colombia.
- CME credits, also local credit.
- Content peer reviewed.
- Targeted at health professionals.
- 6 languages.
- For free.



# Crisis Colombia

- For all registered HCW.
- Colombian experience in Carmen de Bolivar.
- Discuss vaccination program.
- Special version for media/general public?





## Media?

- Find important journalist who is pro-vaccination? Based on Evidence based medicine.
- Has been done in Denmark.
- UK: journalist investigated MMR.
- To public: numbers more important than rates.



## Screening, UK

- 1 in 4 do not attend.
- Uptake declining, particularly in younger women
- Reasons for non-attendance? Which subgroups in particular?
- What is the relevance of screening?
- What is the value of screening?
- 28% were unaware of screening, esp. younger, minorities, low SES
- What might be helpful? Reminders / self test.



## PATH/ vaccination + screening

- New global initiative (2007).
- Availability/affordability/accessibility.
- Maps most used.
- Webinars.
- Cost of action study.
- Involve stake holders / scale up / innovation.
- Six working groups.



## PATH/ vaccination + screening (cont'd)

- Technical assistance (esp. Africa), through Whatsapp.
- Whatsapp content put onto website, as FAQ list.
- Regional Health Observatory (RHO) Cervical Cancer website / HPV flash newsletter.



## Canada, cervical cancer screening

- Canada has done well, 83% reduction.
- Opportunistic screening.
- Inadequacy to recruit marginalized/underserved, at most 50%.
- 2-20 x increased cervical cancer incidence/mortality.
- Also true for Australia/New Zealand, native Americans/Alaskan.



## Canada, cervical cancer screening (cont'd)

- 87% of women felt that self-sampling is a better option than Pap.
- 16% hr-HPV (follow-up needed).
- Pop 100-2000 people.
- Transport critical.
- Trial: Pap versus self-sampling.



## Romania, screening

- Pap screen in the age group of 25-64, every 5 years, uptake is around 50%.
- Selftesting versus assisted Pap in mobile unit.
- HPV screening for Roma and other underserved populations.
- Result in 1 month.
- Referral to cancer center.



## HPV FASTER

- Combination HPV screening – vaccination.
- Vaccination interrupts transmission – herd effect.
- Also other HPV-related cancers.
- Integrated strategy for HIC.
- Vaccination alone or with screen once for LMIC?
- Example Turkey: 1.6M screening tests in 10 months, can those HPV negative be vaccinated?





## CoheaHR

- EU funded.
- Work Package 4: feasibility and acceptability of vaccination of older women (25-45, n = 5000).
- Country-specific approach, investigate uptake & compliance.
- Literature review: >70% acceptance in mid adult women in developed countries.
- Preliminary results: acceptability 50%.



## HPV FASTER modelling

- Model + empirical data.
- Include effect of herd immunity.
- Easy model = simple communication.
- Age at infection is important.
- No increase in effectiveness, but earlier result, more resilient to crisis, due to herd immunity.



## Recommendations

- Each country needs action plan, incl. details where to send afflicted.
- Regular updates of the GACVS website.
- Take alerts seriously, pool all data on AE that are available.
- Clear sense of urgency, many requests for action/involvement: Cervical Cancer Action, hesitance actions, e-learning.



## Recommendations (cont'd)

- Write editorial on the way forward, with clear messages for Japan, Denmark (without naming and shaming).
- Role for WHO, government officials, no delay, be quick and prepared.
- Compilation of how-to's for countries that want to introduce vaccination program.



## Recommendations (cont'd)

- Synthesize the lessons learnt, what has been done wrong, also role for industry, need to have scientific commitment, not just sell product.
- Thematic analysis of pros and cons, should be easy to use, preparing the way to tell the story to the public.



## Recommendations (cont'd)

- Vaccination and screening in one meeting: further need for integration, together convince the world that cervical cancer can be prevented.
- Clarify the process of GACVS on the internet.
- Also spread the good news, start tweeting at lay level.
- Respond to junk science quickly, also raises visibility of HPVPCB, once done, make it public, share

