Patient attitudes to vaccination and screening

Dr Paddy Horner
University of Bristol

Disclosures

- Received funds for research, consultancy and talks and non-financial support
  - Hologic
  - Cepheid
  - Siemens
  - Crown Prosecution Service
  - BASHH

Overview

- HPV vaccination
  - Efficacy
  - Facilitators and barriers to uptake by patients
    - Cognitive
      - Knowledge and advocacy by trusted source
    - Structural
      - Access and cost
  - Education providers and patients
- Chlamydia screening
  - Facilitators and barriers to uptake by patients
- Conclusion

HPV and Disease

- Genital warts 100%
- Cancer
  - Cervical >99%
    - 70% types 16 and 18
  - Anal 85%
  - Vulval ~40%
  - Penile ~40%
  - Oro-pharyngeal ~40%

Castle P Epid & Inf 2016, Georgousakis M Lancet inf Diseases 2012, WHO

HPV vaccination

- >90% efficacy preventing infection and precancerous lesions caused by the vaccine-targeted HPV genotypes in naïve women
- Does **not** treat pre-existing HPV infections
- Recommended before become sexually active
  - 9-13 yrs
- Highly effective in HPV naive MSM
- Safe!

Castle P Epid & Inf 2016,

HPV vaccination

- Herd immunity with high coverage
  - Men
- Cost effective majority countries
  - Middle East low rates cervical cancer – will this change?
- Benefits not realisable until many years later
  - Long term investment

Castle P Epid & Inf 2016,

Patient/Parent – Cognitive facilitators

- Internal validation
  - What disease does it prevent?
  - Does it work?
  - What are the benefits to myself/children and others?
  - Is it safe? (Harmful?)
- External validation
  - Is it recommended by my Doctor?
  - Is it supported by my government?
  - Is it recommended in other countries?
  - Social norms and values relating to sexual activity

Patient – structural barriers

- Is there a cost?
- Is it easy to access?
  - School based programmes
  - Healthcare infrastructure – major cost for low income countries
- Patient and Provider Education

Parents, patients and doctors

- School based programmes more effective
- Clinician advocacy important
- Mandate
- Finance
  - Universal healthcare
  - No re-imbursement - The social deprivation paradigm
- Sexual Mores
  - Doctors – judgemental, and discussing "sex"
  - Parents and discussing sex "too early"
  - Cultural sensitivity
  - Will it encourage early sexual activity

Parents, patients and doctors

- Trust
  - Vaccine safety?
  - Motives of the vaccination companies?
  - Recommended by a trusted source?
  - Anti-vaccination beliefs?
- Consent
  - More of an issue with school based programmes
    - How many parents actually read the forms,
    - Disengaged parents who do not return form
    - Are adolescent girls capable of providing consent within the time frame permitted?
  - Shared decision making between parent and child

HPV vaccination Africa

- HPV related awareness and knowledge - poor
  - Strong association awareness and acceptance
- Health beliefs
  - Variable perceptions of HPV risk but higher for cancer
  - Vaccines in general
  - HPV naive
  - Cancer prevention vs STI prevention
- Barriers
  - Cost and safety
- Cues for action
  - Recommendation: healthcare provider, endorsement government , views of community and mother

HPV demonstration project - Rwanda

- GAVI (Global alliance for Vaccine and immunisation) country
- 2011 - 93% 3 dose coverage of 6th grade females in its first year
  - School based vaccination + community outreach

HPV vaccination and men

- ¾ parents UK, Germany and Italy in favour
- Influenced by:
  - Knowledge of HPV disease and vaccine in men
    - Especially if passive vaccination strategies
  - Countries vaccination programme type
  - Vaccination beliefs

Mortensen G 2015 BMC Public Health, Nadarzynski T 2014 STI

HPV vaccination and men

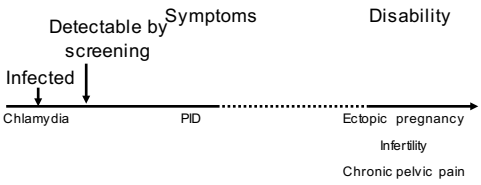
- Men who have sex with men (MSM)
  - Generally poor knowledge and not concerned about HPV related disease
  - 50% would accept it
  - Not possible to identify MSM prior to them becoming sexually active – reducing vaccine efficacy
  - Poor uptake in USA
    - "Shame" complicating factor
  - Good uptake Australia – School based all males

Mortensen G 2015 BMC Public Health, Nadarzynski T 2014 STI, Cummings T STD 2015

Screening

"Screening is a public health service in which members of a defined population, who do not necessarily perceive they are at risk of, or are already affected by a disease or its complications, are asked a question or offered a test, to identify those individuals who are more likely to be helped than harmed by further tests or treatment to reduce the risk of a disease or its complications."

Object of chlamydia screening



- To prevent late sequelae in infected women
- To prevent transmission of infection

Natural history of chlamydia

- Every 1000 CT infections in women aged 16-44 years gives rise to:
- 171 episodes of PID
- 73 episodes of salpingitis
- 5.1 women with TFI at age 44 years.
- 2.0 ectopic pregnancies

Price M et al HTA report 2016 DOI:10.3310/hta20220

Does Chlamydia screening work?

- Reduces risk of pelvic inflammatory disease
- Evidence lacking for it reducing population prevalence
- Is it cost effective?
  - ACCEPt trial ESCR September 2016 http://www.escr2016.co.uk/
- Recommended England and USA
  - Cost effectiveness has been questioned

https://www.gov.uk/government/publications/chlamydia-screening-evidence-summary-and-briefing

Chlamydia screening

- National Chlamydia Screening programme – England
  - Opportunistic screening 15-24yr olds
    - Annually and on change sexual partner
    - Primary care, pharmacy, on line, sexual health
  - Coverage ~ 25-30%: Women > men
- Netherlands RCT using the internet
  - 9-16% uptake and no fall in prevalence: Women>men
  - Revised invitation addressing: risk perception, benefits and risks, moral norm and self advocacy
    - No increase in uptake

http://www.chlamydiascreening.nhs.uk/ps/index.asp

Men and Chlamydia Screening

- Embarrassment
- Stigmatisation especially if found to be positive
  - "Dirty", promiscuous
- Knowledge less then females
  - Associated symptoms or "lack off"
  - Future complications
- Less able/willing to address healthcare issues in general
  - Interest is in "fitness for sex" as opposed to taking responsibility for their own sexual health

Loaring J 2013 JFPRHC

Cognitive facilitators

- Internal validation
  - What disease does it prevent?
  - Does it work?
  - What are the benefits to myself?
  - Is it safe?
  - Harm – stigma?
- External validation
  - Is it recommended by my Doctor?
  - Is it supported by my government?
  - Is it recommended in other countries?
  - Social norms and values

Structural barriers

- Is there a cost?
  - Patient vs Healthcare provider
- Is it easy to access?
  - Opportunistic vs opt-in vs opt-out
    - Healthcare setting vs home-based
- Patient and Provider Education

McNulty F Fam Prac 2010, Yeung A 2015 Aust J Prim Halth

Conclusion

- For good uptake of vaccination/screening the following need to be addressed:
  - Cognitive factors
    - Internal and external validation
    - Social mores/stigma
  - Structural factors
    - Access
      - Opt out works better
    - Cost
  - Education of providers and patients