Baseline HPV prevalence in MSM: assessing the impact of the selective HPV vaccination programme

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Joint Commission on Vaccination and Immunisation (JCVI)

- JCVI statement in November 2015

- MSM are at high risk of HPV infection and associated disease

- Receive little to no benefit from the girls only programme

- Following revised modelling work undertaken by Public Health England, a vaccination programme was recommended for MSM attending sexual health clinics
MSM HPV Vaccination Programme Implemented 1\textsuperscript{st} July 2017

- Sexual health and HIV clinics
- MSM $\leq 45$ years old
- Prisoners and transgender women included
- Gardasil is the (current) vaccine of choice
- 3-dose schedule for those aged 15-45
- Those aged under 15 only require 2 doses
Vaccine uptake via prescription data

One dose HPV vaccine uptake among MSM in Scotland, July 2017 – June 2019 (n=9146)

Note: NHS board is based on most recent appointment location
Vaccine uptake

- Vaccine uptake via prescription data
- HPV vaccine uptake among MSM in Scotland, July 2017 – June 2019 (n=9146)

Note: NHS board is based on most recent appointment location
HPV vaccine uptake among MSM by age group, Scotland, July 2017–June 2019

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number of MSM receiving at least one dose</th>
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<tbody>
<tr>
<td>Under 20</td>
<td>0</td>
</tr>
<tr>
<td>20-24</td>
<td>2,500</td>
</tr>
<tr>
<td>25-29</td>
<td>2,250</td>
</tr>
<tr>
<td>30-34</td>
<td>1,500</td>
</tr>
<tr>
<td>35-39</td>
<td>1,000</td>
</tr>
<tr>
<td>40-45</td>
<td>750</td>
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</tbody>
</table>

Note: Assignment to age group is based on age at first prescription.
Vaccine impact

- HPV related disease
  - diagnoses of genital warts via prescription data
- HPV prevalence
  - prevalence of HPV in rectal swabs in men pre and post implementation of HPV vaccine
Genital wart treatment prescriptions

- Data extracted from the national sexual health database
- Includes prescriptions for:
  - Podophyllotoxin
  - Imiquimod
  - Cryotherapy
- Data are for prescriptions, not individuals
- Site of genital warts not known
Number of individuals receiving a prescription for genital warts by gender, Scotland, 2010 - 2018
HPV type prevalence in rectal swabs- Methodology

- Rectal swabs taken between October 2016 and February 2017 for GC/CT testing

- One sexual health clinic that covers City of Edinburgh and outlying counties (16% of population)

- Residual sample tested and typed for 24 high and low risk types

- 1,210 samples were sufficient for testing and included in analysis

- Prevalence of any HPV, high-risk HPV and vaccine type HPV assessed
Prevalence of combinations of HPV types from rectal swab samples by age group

Any HPV
HR HPV
Nonavalent
Quadrivalent
HPV 16/18
HPV 6/11

Percentage samples positive

16-20 (n=55)
21-25 (n=237)
26-30 (n=197)
31-35 (n=192)
36-40 (n=152)
41-45 (n=95)
>45 (n=282)
Prevalence of HPV in rectal swabs post introduction of HPV vaccination

• Further rectal swab samples were tested and typed for HPV a year after introduction of programme

• 1235 samples sufficient for analysis

• Taken in same setting and same median age of men in baseline and second sample (33 years)

• Overall, HPV prevalence was higher in post vaccine sample

• However…..
HPV prevalence and type in rectal swab samples from men pre (n=1209) and post (1235) introduction of targeted HPV vaccination programme
Conclusions and further work

• Uptake of HPV vaccine is relatively high in MSM attending sexual health clinics

• MSM vaccinated that had no prior attendance at SH clinics (38%)

• Completion rates likely to be underestimated

• Treatments for genital warts remain stable in MSM

• Prevalence of HPV is high in MSM and generally increased with age but similar in older age groups

• 50% of samples were negative for a quadrivalent vaccine type

• Indications of vaccine effect on HPV prevalence but further sampling needed

• Potential future work
  • Linkage of vaccine status to GW treatment prescribing data
  • Linkage of vaccine status to prevalence data
  • Long term – HPV driven cancers
Acknowledgements
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