Symposium

HPV and non-cervical cancers: new challenges for behavioural science
HPV and non-cervical cancers: new challenges for behavioural science

Chair: Jo Waller
Discussant: Laura Marlow
Speakers: Jo Waller, Tom Nadarzynski, Laura Sadler, Rachael Dodd
1. Overview of link between HPV and non-cervical cancers (Jo Waller)
2. Attitudes of sexual health professionals to selective HPV vaccination for MSM in the UK (Tom Nadarzynski)
3. Anal cancer: What do those at increased risk know about the disease and think about screening to detect its precursors? (Laura Sadler)
4. Discussing HPV in oral cancer: a qualitative study of health professionals (Rachael Dodd/Jo Waller)
5. Discussion (Laura Marlow)
Acknowledgements

This symposium has been funded by a conference and meeting award from Cancer Research UK
Overview of the link between HPV and non-cervical cancers

Dr Jo Waller

Cancer Research UK Health Behaviour Research Centre
Department of Epidemiology and Public Health
j.waller@ucl.ac.uk
Human papillomavirus (HPV)

- Group of viruses – 100+ different types
- Infect epithelial cells
- High risk types can cause cancer (esp. types 16 and 18)
- Low risk types cause warts and verrucas
- Transmitted by skin-to-skin contact (often sexual)

Doorbar (2006) Clinical Science
Human papillomavirus (HPV) and cancer

- Cervical cancer – 100% (necessary cause; strong data)
- Anal cancer – 88% (strong data)
- Penile cancer – 50% (limited data)
- Vulval cancer – 43% (limited data)
- Vaginal cancer – 70% (limited data)
- Oropharyngeal cancer – regional variations; ~50% in developed countries (limited data)
Behavioural implications – vaccination

- HPV vaccine protects against high- and low-risk types
- Available in the UK for:
  - Girls aged 12-13 years (and up to age 18) – offered in schools
  - Planned implementation for men who have sex with men (MSM), age 16-40 years – via GUM and HIV clinics
Behaviour implications – screening

• Cervical and other ano-genital cancers have pre-cancerous stages
• Screening to detect and treat pre-cancer can reduce cancer incidence
• Success depends on uptake
What can behavioural science contribute?

- Understanding participation in vaccination and screening
- Exploring the psychological impact of HPV positive results
- Developing better ways to communicate with patients and the public and HPV and cancer risk
Key findings from cervical literature

Low but rising awareness of HPV

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Recalled</th>
<th></th>
<th>Recognised</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>%</td>
<td>(n)</td>
<td>%</td>
</tr>
<tr>
<td>Having many sexual partners</td>
<td>272</td>
<td>19.5</td>
<td>884</td>
<td>63.5</td>
</tr>
<tr>
<td>Smoking any cigarettes</td>
<td>121</td>
<td>8.7</td>
<td>706</td>
<td>50.7</td>
</tr>
<tr>
<td>Starting to have sex at a young age</td>
<td>111</td>
<td>8.0</td>
<td>758</td>
<td>54.4</td>
</tr>
<tr>
<td>Unprotected sex</td>
<td>101</td>
<td>7.3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Not going for regular smear (Pap) tests</td>
<td>78</td>
<td>5.6</td>
<td>1046</td>
<td>75.2</td>
</tr>
<tr>
<td>Infection, STI/STD or virus</td>
<td>20</td>
<td>1.4</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Infection with Chlamydia</td>
<td>19</td>
<td>1.4</td>
<td>748</td>
<td>53.7</td>
</tr>
<tr>
<td>Infection with Human Papillomavirus (HPV)</td>
<td>15</td>
<td>1.1</td>
<td>643</td>
<td>46.2</td>
</tr>
<tr>
<td>Long term use of the contraceptive pill</td>
<td>4</td>
<td>0.3</td>
<td>460</td>
<td>33.0</td>
</tr>
<tr>
<td>Having a sexual partner with many previous partners</td>
<td>4</td>
<td>0.3</td>
<td>740</td>
<td>53.1</td>
</tr>
<tr>
<td>Having many children</td>
<td>3</td>
<td>0.2</td>
<td>167</td>
<td>12.0</td>
</tr>
<tr>
<td>Having a weakened immune system (e.g. because of HIV/AIDS, immunosuppressant drugs or having a transplant)</td>
<td>2</td>
<td>0.1</td>
<td>692</td>
<td>49.7</td>
</tr>
</tbody>
</table>

Low et al (2012), Euro J Cancer
Key findings from cervical literature

Psychological consequences of HPV result

Maissi et al (2004), BMJ
Key findings from cervical literature

Psychological consequences of sexually transmitted infection

Concerns relating to the sexually transmitted nature of HPV
Stigma of STI
Guilt and blame for the cause of the infection
Anxiety about disclosure to sexual partners
Anxiety about disclosure to family and friends
Concerns about transmitting the infection

McCaffery et al (2006), Sex Trans Infect
Key findings from cervical literature

Predictors of vaccine acceptability

Systematic review (in the US) using HBM framework:
- Perceived prevalence of HPV
- Perceived effectiveness of the vaccine
- Perceptions about impact on sexual behaviour
- Physician recommendation

Anal cancer incidence
Oral cancer incidence

Figure 1.2: Oral Cancer (C00-C06, C09-C10, C12-C14), European Age-Standardised Incidence Rates, Great Britain, 1975-2011
Future directions

- HPV vaccination for men
- Anal cancer screening for high-risk groups
- HPV in head and neck cancer
Any questions before we start the talks?

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Twitter @Jo_WallerUCL
HPV vaccination for men who have sex with men (MSM)

Tom Nadarzynski
Brighton and Sussex Medical School
THE GARDEN OF EARTHLY DELIGHTS (BOSCH, 1510)
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Why target men who have sex with men?
Why target men who have sex with men?

1) Female HPV vaccination does not protect MSM

Source: Chow et al. 2014 – Sexually Transmitted Infections
Why target men who have sex with men?

1) Female HPV vaccination does not protect MSM
2) MSM are at higher risk of anal cancer

Source: Machalek et al. 2012 – The Lancet Oncology
Why target men who have sex with men?

1) Female HPV vaccination does not protect MSM
2) MSM are at higher risk of anal cancer
3) Gender-neutral HPV vaccination is not cost-effective

Comparing the cost-effectiveness of two- and three-dose schedules of human papillomavirus vaccination: A transmission-dynamic modelling study

Jean-François Laprisea, Mélanie Droleta, b, Marie-Claude Boilyc, Mark Jitd, e, Chantal Sauvageaue, Eduardo L. Francof, Philippe Lemieux-Melloukiab, c, Talía Malagóna, b, Marc Brissona, b, c

doi: 10.1016/j.vaccine.2014.07.099

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Highlights
- 2-dose girls-only HPV vaccination is likely to be cost-effective if protection is at least 10 years.
- A 3rd dose is unlikely to be cost-effective if 2-dose duration of protection is longer than 30 years.
- Vaccinating boys is unlikely to be cost-effective unless the cost/dose is substantially reduced.
Why targeting men who have sex with men?

1) Female HPV vaccination does not protect MSM
2) MSM at higher risk of anal cancer
3) Gender-neutral HPV vaccination is not cost-effective
4) Anal cancer screening for MSM is not cost-effective
HPV vaccination for MSM in the UK might be cost-effective, if:

1. Use quadrivalent vaccine
2. Delivered at sexual health clinics
3. Target men <40 years old
4. Achieve 100% uptake and completion
Can we achieve 100% uptake in MSM?
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1) HIV testing: 15-30% of MSM never tested for HIV (EMIS, 2010)
Can we achieve 100% uptake in MSM?

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2) **Hepatitis B vaccination:** 80% uptake, 50% completion (PHE, 2006)
Can we achieve 100% uptake in MSM?

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2) **Hepatitis B vaccination:** 80% uptake, 50% completion [PHE, 2006]

3) **HPV vaccine acceptability:** 65% /r: 0-86%/ [Nadarzynski et al, 2014]
Can we achieve 100% uptake in MSM?

1) HIV testing: 15-30% of MSM never tested for HIV (EMIS, 2010)
2) Hepatitis B vaccination: 80% uptake, 50% completion (PHE, 2006)
3) HPV vaccine acceptability: 65% /r: 0-86%/ (Nadarzynski et al, 2014)
   * HPV awareness
   * Openness about sexual orientation
   * Risk perceptions of HPV-induced diseases
   * Positive attitudes towards HPV vaccination
   * Doctor’s recommendation of HPV vaccine
Can we achieve 100% uptake in MSM?

1) HIV testing: 15-30% of MSM never tested for HIV (EMIS, 2010)
2) Hepatitis B vaccination: 80% uptake, 50% completion (PHE, 2006)
3) HPV vaccine acceptability: 65% /r: 0-86%/ (Nadarzynski et al 2014)
4) Attitudes of sexual health professionals in the UK (Nadarzynski, in press)
Can we achieve 100% uptake in MSM?

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3) HPV vaccine acceptability: 65% /r: 0-86%/ (Nadarzynski et al 2014)

4) Attitudes of sexual health professionals in the UK (Nadarzynski, in press)
   - 84% would recommend gender-neutral HPV vaccination
   - 64% would recommend targeted HPV vaccination for MSM
   - 18% would not recommend targeted HPV vaccination for MSM
   - 44% feel informed about HPV and MSM
   - 13% have already been vaccinating MSM at GUM clinics
Differences in views

“Given the current financial climate about Britain and the NHS cuts I think targeted vaccination should be strategised to high risk groups.” *(Consultant, Male)*

“If you really want to make a difference, you have to vaccinate all boys.” *(Nurse, Female)*

“Waste of public resources because (of) insufficient risk.” *(Consultant, Male)*
Is there a need for input from the behavioural sciences?
Future research

• To assess the motivations of MSM towards HPV vaccine
• To examine whether informing MSM about HPV increases motivation
• To identify the uptake rate
• To identify perceived barriers in healthcare professionals
• To measure the impact of targeted vaccination in non-MSM
Thank you

t.nadarzynski@bsms.ac.uk
Anal Cancer: What do those at increased risk know about the disease and what do they think about screening to detect its precursors?

L. Sadler, A. Schofield, J. Waller, J. Patnick, H.C. Kitchener

Funded by: NHS Cancer Screening Programmes, operated by Public Health England.
Anal cancer and its precursors are uncommon in the general population but incidence is increasing. High-risk populations include: HIV+ men and women, MSM and immunosuppressed transplant patients. Incidence rates among HIV+ MSM are estimated to be more than 80 times higher than HIV uninfected men and women (Silverberg et al, 2012)

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Male</th>
<th>Females</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of new UK cases per year (2011)</td>
<td>414</td>
<td>761</td>
<td>1175</td>
</tr>
<tr>
<td>Incidence rate per 100,000 population</td>
<td>1.1</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Number of UK deaths per year (2012)</td>
<td>115</td>
<td>192</td>
<td>307</td>
</tr>
<tr>
<td>Incidence rate per 100,000 population</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Source: Cancer Research UK
The ANALOGY Study

- Ongoing prospective study
- Assessing the feasibility and effectiveness of anal screening.
- LBC, HPV, HRA and biopsy if needed

- Recruiting since March 2013
- Recruiting (aged 25+):
  - HIV+ men who have sex with men (MSM)
  - HIV- MSM
  - Transplant recipients (male and female)
Method

• Self-completed questionnaire at first appointment (Baseline)

• Self-completed questionnaire at second appointment (6 months)
## Recruitment (Baseline)

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+ MSM</td>
<td>183</td>
</tr>
<tr>
<td>HIV- MSM</td>
<td>76</td>
</tr>
<tr>
<td>Male transplant</td>
<td>56</td>
</tr>
<tr>
<td>Female transplant</td>
<td>39</td>
</tr>
<tr>
<td>Overall</td>
<td>354</td>
</tr>
</tbody>
</table>
### Baseline questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>Heard of anal cancer % (n) (n=365)</th>
<th>Heard of HPV % (n) (n=365)</th>
<th>Link HPV and AC % (n) (n=363)</th>
<th>Member high risk group % (n) (n=364)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+ MSM</td>
<td>78.7 (144)</td>
<td>61.2 (112)</td>
<td>47.5 (86)</td>
<td>45.1 (82)</td>
</tr>
<tr>
<td>HIV- MSM</td>
<td>69.7 (53)</td>
<td>63.2 (48)</td>
<td>55.3 (42)</td>
<td>30.3 (23)</td>
</tr>
<tr>
<td>Male transplant</td>
<td>33.9 (19)</td>
<td>32.1 (18)</td>
<td>17.9 (10)</td>
<td>28.5 (16)</td>
</tr>
<tr>
<td>Female transplant</td>
<td>53.8 (21)</td>
<td>48.7 (19)</td>
<td>41.0 (16)</td>
<td>35.9 (14)</td>
</tr>
<tr>
<td><strong>ALL PARTICIPANTS</strong></td>
<td><strong>64.9 (237)</strong></td>
<td><strong>53.9 (197)</strong></td>
<td><strong>42.4 (154)</strong></td>
<td><strong>37.1 (135)</strong></td>
</tr>
</tbody>
</table>
Beliefs about anal cancer and screening

- If precancerous cells are found at screening, they should be treated straight away:
  - Strongly agree: 5
  - Agree: 4
  - Neither agree nor disagree: 3
  - Disagree: 2
  - Strongly disagree: 1

- Some anal precancerous cells will never become cancer:
  - Strongly agree: 5
  - Agree: 4
  - Neither agree nor disagree: 3
  - Disagree: 2
  - Strongly disagree: 1

- People at risk for anal cancer should be offered screening:
  - Strongly agree: 5
  - Agree: 4
  - Neither agree nor disagree: 3
  - Disagree: 2
  - Strongly disagree: 1

Legend:
- HIV+ MSM (n=183)
- HIV- MSM (n=76)
- Male transplant (n=56)
- Female transplant (n=39)
## 6 month questionnaire

<table>
<thead>
<tr>
<th>Group</th>
<th>Number completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+ MSM</td>
<td>59</td>
</tr>
<tr>
<td>HIV- MSM</td>
<td>24</td>
</tr>
<tr>
<td>Transplant male</td>
<td>39</td>
</tr>
<tr>
<td>Transplant female</td>
<td>27</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>149</strong></td>
</tr>
</tbody>
</table>
How would you describe your experience of taking part in the ANALOGY study?

<table>
<thead>
<tr>
<th>Group</th>
<th>Very positive</th>
<th>Mostly positive</th>
<th>Mostly negative</th>
<th>Very negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV+ MSM</td>
<td>44</td>
<td>14</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>HIV- MSM</td>
<td>20</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Male transplant</td>
<td>31</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Female transplant</td>
<td>21</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>116 (79.4%)</td>
<td>29 (19.8%)</td>
<td>1 (0.7%)</td>
<td>0</td>
</tr>
</tbody>
</table>

- 92.4% agreed they would attend screening again
- 70.5% were willing to attend every year and 25.3% every two to three years
Did you discuss taking part in the study with your partner?

- **HIV+ MSM**
  - Yes: 30
  - No: 10
  - No partner at time: 20

- **HIV- MSM**
  - Yes: 15
  - No: 5
  - No partner at time: 5

- **Male transplant**
  - Yes: 25
  - No: 25
  - No partner at time: 25

- **Female transplant**
  - Yes: 17
  - No: 3
  - No partner at time: 1

Legend:
- Green: No partner at time
- Red: No
- Blue: Yes
Did you discuss taking part in the study with your family or friends?

- HIV+ MSM
- HIV- MSM
- Male transplant
- Female transplant

Number

No

Yes
Amount of distress/worry experienced waiting for results

Rating
0 = No distress
10 = Extreme distress

Number
Amount of distress/worry experienced since receiving results

Rating
0 = No distress
10 = Extreme distress

Number
Expect to get a 'positive' result

- HIV+ MSM: 40 Unsure, 10 No, 5 Yes
- HIV- MSM: 5 Unsure, 15 No, 5 Yes
- Male transplant: 20 Unsure, 15 No, 5 Yes
- Female transplant: 10 Unsure, 10 No, 5 Yes
How worried are you about getting cancer in your lifetime?

- Very worried
- Worried
- Somewhat worried
- Slightly worried
- Not at all worried

- HIV+ MSM
- HIV- MSM
- Male transplant
- Female transplant
How worried are you about getting anal cancer in your lifetime?

Level of Worry

- Very worried
- Worried
- Somewhat worried
- Slightly worried
- Not at all worried

Number

HIV+ MSM
HIV- MSM
Male transplant
Female transplant
Has taking part in the ANALOGY study had any effect on how you think about your health?

- Lot less worried
- A bit less worried
- Views unchanged
- A bit more worried
- Lot more worried

- Female transplant
- Male transplant
- HIV- MSM
- HIV+ MSM
Has taking part in this study changed how you view your risk of anal cancer?

- Feel a lot more at risk
- Feel more at risk
- Views unchanged
- Feel less at risk
- Feel a lot less at risk

Legend:
- Female transplant
- Male transplant
- HIV- MSM
- HIV+ MSM
23.8% MSM reported changing sexual behaviour (12/57 HIV+ and 7/23 HIV- MSM)

‘just be careful and no matter what should practice safe sex’
‘protection between both partners’
‘more careful’
‘more concerned with not causing trauma if having anal sex’
‘use condoms’
‘no casual sex’
‘not having anal sex as much’
‘concerned over whether to participate in anal sex’
‘less sexual partners, more cautious’
‘safer sex’
Interim conclusions

• Acceptable to MSM and transplant recipients
• Low levels of knowledge particularly about belonging to high risk group
• Education programme would be needed if a screening programme introduced
Questions?

Discussing a diagnosis of human papillomavirus oropharyngeal cancer with patients

Rachael Dodd, Laura Marlow, Jo Waller
Health Behaviour Research Centre
Department of Epidemiology and Public Health, UCL

UKSBM December 2014
Background

• Approx. 650,000 new head and neck cancer (HNC) cases diagnosed each year – 6th most common type of cancer in the world
• Link between human papillomavirus (HPV) and HNC has emerged over the last 20 years
• 2008: estimated 85,000 oropharyngeal cancers worldwide, at least 22,000 HPV positive
  – back one third of the tongue
  – soft palate
  – tonsils
  – side and back walls of the throat

Parkin et al, 2005; de Martel et al, 2012
Background

- UK incidence rate doubled
- Total number of cases in US expected to surpass cervical cancer cases by 2020 if current trend continues
- Patients more likely to be:
  - Male
  - White
  - Under 50 years old
  - Married
  - Educated and employed

Mehanna et al, 2010; Chaturvedi et al, 2011
Background

• Compared to HPV- patients, HPV+ patients:
  – Are younger
  – Have higher SES
  – Have a better prognosis

• HPV testing in some UK centres

• Current trials looking at de-escalating treatment in the future
Background

- Different treatment and rehabilitation needs
- Health professionals: potential challenge for those with little experience of discussing sexual behaviour
- Patient: potential feelings of stigma and shame in addition to anxiety and health concerns
- Ethical obligation to ensure accuracy and transparency when disclosing HPV as the cause of a patient’s cancer
Aims

• Map a broad range of experiences and views from professionals working with this patient group
• Seek explanations for differences in experiences, in the hope that this work would inform future quantitative studies and interventions.
Methods

• Qualitative study
• Sampled purposively 15 health professionals around England and Wales
• 8 hospitals
• Surgeons, oncologists, nurses and allied health professionals
• Semi-structured interviews using a topic guide in May and June 2013
• Face-to-face or telephone
• Thematic analysis
## Sample Characteristics (n=15)

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age [median (range)]</strong></td>
<td>47 (33-59)</td>
</tr>
<tr>
<td><strong>Sex [n]</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
</tr>
<tr>
<td><strong>Ethnicity [n]</strong></td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td><strong>Profession [n]</strong></td>
<td></td>
</tr>
<tr>
<td>Surgeon</td>
<td>5</td>
</tr>
<tr>
<td>Clinical oncologist</td>
<td>3</td>
</tr>
<tr>
<td>Specialist nurse</td>
<td>4</td>
</tr>
<tr>
<td>Research nurse</td>
<td>1</td>
</tr>
<tr>
<td>Specialist radiographer</td>
<td>1</td>
</tr>
<tr>
<td>Speech and language therapist</td>
<td>1</td>
</tr>
<tr>
<td><strong>Geographic area [n]</strong></td>
<td></td>
</tr>
<tr>
<td>North West England</td>
<td>4</td>
</tr>
<tr>
<td>North East England</td>
<td>2</td>
</tr>
<tr>
<td>South West England</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>4</td>
</tr>
<tr>
<td>South East England</td>
<td>3</td>
</tr>
<tr>
<td>Wales</td>
<td>1</td>
</tr>
</tbody>
</table>
The significance of HPV in oropharyngeal cancer

‘we have seen a change … over the last … decade where increasingly we’re seeing younger, non-smoking, non-drinking patients who are on average ten years younger and recognising in that patient group that their HPV associated disease is the main risk factor for that.’ (P3, clinical oncologist)

Attitudes to discussing HPV

‘When it comes to HPV disease, I mean what can you tell them? … There’s nothing that they need to adapt in their lifestyle which is going to make any difference to their outcome at all.’ (P7, surgeon)
Challenges to discussing HPV

‘They start asking questions about how I caught HPV and when I caught it and who I caught it from, how will I have caught it. And some of those questions are difficult to answer because we don’t have the scientific knowledge at the moment’ (P5, clinical oncologist)

Dealing with the impact of HPV on relationships

‘The wife was [saying] ‘How’s he got it, when did he get it’… she felt … this must be a sign that he’d been unfaithful and had other partners outside of the marriage … That was obviously causing some problems between the two of them.’ (P5, clinical oncologist)
Patient concerns and questions about HPV

‘I had this one guy who was HPV positive and obviously he was really worried about passing this onto his wife or being re-infected by HPV if he continued to practice oral sex… He also was really worried about his son … and he was looking into getting his son vaccinated privately’ (P15, clinical nurse specialist)

Professional development

‘I mean for us it was finding out more information … we talked about the types of questions that patients might ask and then also just learning from experience about the types of things that people are asking … because if one’s going to ask, the next are.’ (P15, clinical nurse specialist)
Key messages for patients

<table>
<thead>
<tr>
<th>Normalising HPV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Prevalence</strong>: anyone who is sexually active will have been exposed to it</td>
</tr>
<tr>
<td><strong>Normal sexual behaviour</strong>: not an indication the patient was promiscuous</td>
</tr>
<tr>
<td><strong>Link with cervical cancer/HPV vaccination</strong>: to help patients understand the same virus is involved in both cancers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No need to change behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a patient was worried they had caused their cancer, reassure nothing need to do to change behaviour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive prognosis</th>
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<tbody>
<tr>
<td>Telling patients they have a better prognosis than HPV-negative patients, seen as a bit of good news</td>
</tr>
</tbody>
</table>
Conclusions

• Health professionals are presented with a new challenge:
  – Questions asked
  – Factors important to patients
  – Rehab and treatment needs
• Need for clinical guidance to ensure patients are receiving consistent messages
• Adapt information from cervical cancer literature
Future plans

• A larger quantitative study with health professionals
• To interview patients and their partners about the impact of a HPV positive diagnosis
• Develop patient information material
References


