European Association of Dental Public Health Expert Working Group

5. Prevention of Oral Cancer

Thursday 15th November 2012, 2.45pm - 4.30pm

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17th Annual Congress of the European Association of Dental Public Health
Resolution WHA60 A16 URGES Member states- To take steps to ensure that prevention of oral cancer is an integral part of national cancer-control programmes, and to involve oral-health professionals or primary health care personnel with relevant training in oral health in detection, early diagnosis and treatment.
Head & neck cancer (ICD-10; C00-C14, C30-C32)

- Cancer of the lip, oral cavity and pharynx: C00-C14 (non melanoma)
- Cancer of the mouth: (IARC) C03-C06
- Cancer of the oral cavity: C01-C06
- Cancer of the salivary glands: C07-C08
- Cancer of the tongue: C01-C02
- Cancer of the nose, middle ear & sinuses: C30/31
- Cancer of the larynx: C32
Presentation of Oral Cancer
Age (Europe)
• 98% are over 40 years of age
• 50% are over 60 years of age
Gender
• Male 4:1
Smoker/drinker (including smokeless tobacco)
• 75% of cases


Figure 2: Estimated age-standardised incidence rate (IR) per 100,000 of cancer in the lip, oral cavity, both sexes and all ages across Europe (IARC 2012b: GLOBOCAN 2008)

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Estimated age-standardised incidence rate per 100,000, lip and oral cancer, Males, all ages, 2008, Europe.

GLOBOCAN 2008 (IARC)
<table>
<thead>
<tr>
<th>Country</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyprus</td>
<td>2.29</td>
</tr>
<tr>
<td>Greece</td>
<td>2.29</td>
</tr>
<tr>
<td>Iceland</td>
<td>2.61</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.51</td>
</tr>
<tr>
<td>Norway</td>
<td>4.64</td>
</tr>
<tr>
<td>Finland</td>
<td>4.86</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.90</td>
</tr>
<tr>
<td>Austria</td>
<td>5.08</td>
</tr>
<tr>
<td>Bosnia Herzegovena</td>
<td>5.18</td>
</tr>
<tr>
<td>FYR Macedonia</td>
<td>5.25</td>
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<td>Switzerland</td>
<td>5.41</td>
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<tr>
<td>Ireland</td>
<td>5.43</td>
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<tr>
<td>Latvia</td>
<td>5.55</td>
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<tr>
<td>The Netherlands</td>
<td>5.72</td>
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<tr>
<td>Germany</td>
<td>5.84</td>
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<td>Italy</td>
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<td>Malta</td>
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<tr>
<td>Serbia</td>
<td>6.56</td>
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<tr>
<td>Bulgaria</td>
<td>6.63</td>
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<tr>
<td>Czech Republic</td>
<td>6.65</td>
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</tbody>
</table>

Estimated age-standardised incidence Rate per 100,000, lip and oral cancer, Males, all ages, 2008, Europe.

GLOBOCAN 2008 (IARC)
<table>
<thead>
<tr>
<th>Country</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
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<tr>
<td>Montenegro</td>
<td>7.28</td>
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<tr>
<td>Albania</td>
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<tr>
<td>Poland</td>
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<td>Slovenia</td>
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<td>Estonia</td>
<td>7.48</td>
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<tr>
<td>Republic of Moldova</td>
<td>7.87</td>
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<tr>
<td>France (metropolitan)</td>
<td>8.15</td>
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<tr>
<td>Belgium</td>
<td>8.18</td>
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<tr>
<td>Lithuania</td>
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<tr>
<td>Russian Federation</td>
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<td>Luxembourg</td>
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<td>Portugal</td>
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<td>Spain</td>
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<td>Slovakia</td>
<td>11.44</td>
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<td>Hungary</td>
<td>16.51</td>
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</tbody>
</table>

Estimated age-standardised incidence Rate per 100,000, lip and oral cancer, Males, all ages, 2008, Europe.

GLOBOCAN 2008 (IARC)
In the UK

• Squamous cell carcinoma - 85%
• Miscellaneous tumours
• Metastatic disease – primary tumour classification
# Head & neck cancer, Scotland

<table>
<thead>
<tr>
<th>2010</th>
<th>N</th>
<th>H&amp;N % of total</th>
<th>Position in cancer league</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>828</td>
<td>5.9%</td>
<td>4&lt;sup&gt;th&lt;/sup&gt; commonest Prostate 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Female</td>
<td>345</td>
<td>2.2%</td>
<td>10&lt;sup&gt;th&lt;/sup&gt; commonest Breast 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Both</td>
<td>1173</td>
<td>4%</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; commonest Lung etc. 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
Oral cancer

• Scotland 487 cases / year  Incidence  
  – Males 12 per 100,000  
  – Females 5 per 100,000

• Almost double English rates

• Age Distribution
  – 85% < 50 years, increasing in young
  – no longer a disease of the elderly.
Head & Neck cancer (ICD-10, C00-C14, C30-C32) in Scotland, European Age Standardised Population Incidence and mortality rates by SIMD quintile, persons (Incidence 2002/06. Mortality 2004/08)

EASR rates per 100,000

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Head & neck cancer

**Smoking / tobacco** use
(OR ever vs never smoking = 2.13, 95% CI = 1.52 to 2.98),

**Alcohol**
(OR >3 drinks / day vs never drinking = 2.04, 95% CI = 1.29 to 3.21).

**Alcohol & tobacco** synergism causes 75% of head & neck cancers; 37-fold increase in RR males, smoked & drunk alcohol heavily for over 20 years, compared to teetotal, non-smokers.

**Diet** low in fresh fruit and vegetables
- each portion of fruit (OR 0.49 95% CI = 0.40 to 0.65)
- vegetables (OR 0.50 95% CI = 0.38 to 0.65)

**Human Papilloma Virus** (HPV) infection (OR 1.5 CI = 1.1 to 2.1) for oral cavity (HPV 16) perhaps subset of oral / oropharyngeal cancers

**Unknown**

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Oral cancer screening

• Early presentation = better 5-year survival
• Treatment is disfiguring
• Not a common disease
• High risk categories – likelihood of correct ‘reach’
• Visual screening test has poor discrimination
• Natural history of the disease uncertain
• Large number of false positives = worried well!!!

Recommendation; Opportunistic screening of high risk individuals in primary care
Prevention of Oral Cancer

1. Smoking cessation
   • smokeless tobacco

2. Moderation of alcohol intake

3. Improve diet – fruit and vegetables

4. Human Papilloma Virus – oropharyngeal subset (?)
   • HPV vaccination
   • Others

5. Sun protection – cancer of the lip!
Prevention of Oral Cancer

1. Smoking cessation

Ban on tobacco advertising
Reduce availability time / place
Ban on smoking in public places / workplaces
Increase tobacco duty
Enforce age limits
Enforce import / smuggling laws
Prevention of Oral Cancer

1.1 Smokeless tobacco

Prohibit sale of smokeless tobacco
Ban on advertising
Increase tobacco duty
Enforce age limits
Enforce import / smuggling laws
Prevention of Oral Cancer

2. Moderation of alcohol intake

Ban on alcohol advertising
Reduce availability time / place
Increase alcohol duty / minimum pricing
Enforce age limits
Enforce drink / driving laws
Enforce import / smuggling laws
Prevention of Oral Cancer

3. Improve diet – fruit & vegetables

Food standards in schools
Free fruit in schools
Salad bar for all retail meals
Sugar, salt, fat tax
Prevention of Oral Cancer

4. Human Papilloma Virus – oropharyngeal subset (?)
   • HPV vaccination
   • Other approaches

5. Sun protection – cancer of the lip!
Special interest working group

Oral cancer

Katrin Hertrampf

Clinic of Oral and Maxillofacial Surgery
University Hospital Schleswig Holstein
Campus Kiel, Germany
Stagnation of the number of newly diagnosed cases each year

Majority are diagnosed at advanced stages

Low 5-year survival rate
Background

- Lack of knowledge within the public
- A high willingness to displace signs or symptoms
Yellowitz et al. 1998: Knowledge, opinions and practices of general dentists regarding oral cancer: A pilot study

Yellowitz et al. 2000: Survey of U.S. dentists' knowledge and opinions about oral pharyngeal cancer


Alonge & Narendran 2003: Opinions about oral cancer prevention and early detection among dentists practising along the Texas-Mexico Border

Alonge & Narendran 2004: Oral cancer knowledge and practices of dentists along the Texas-Mexico Border

Gajendra et al. 2006: Oral cancer prevention and early detection: Knowledge, practices, and opinions of oral health care providers in New York State

Colella et al. 2008: Oral cancer and dentists: knowledge, attitudes, and practices in Italy

Hertrampf et al 2010: Dentists' perspectives on oral cancer: a survey in Northern Germany and a comparison with international data
Horowitz et al. 1995: U.S. adult knowledge of risk factors and signs of oral cancers
Horowitz et al. 1998: Maryland adults’ knowledge of oral cancer and having oral cancer examinations
Warnakulasuriya et al. 1999: An alarming lack of public awareness towards oral cancer
Patton et al. 2004: Oral cancer knowledge and examination experiences among North Carolina adults
Tomar & Logan 2005: Florida adults’ oral cancer knowledge and examination experiences
West et al. 2006: Awareness of mouth cancer in Great Britain
Hertrampf et al. 2011: Public awareness about prevention and early detection of oral cancer. A population-based study in Northern Germany
Focus for today

- Healthcare provider education programmes
- Exchange of working experiences
- Prevention of oral cancer
Thank you