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# CANCER PREVENTION AND AETIOLOGICAL RISK FACTORS

## Abstract P-01

### What factors influence smoking behaviour in young females?

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**Background:** Tobacco smoking is the single biggest cause of cancer in the world. Although there is a lot of research on youth smoking, very few studies have looked at females in the 11–12 year age group – the age at which many studies suggest females start to smoke. This study was designed to address this evidence gap.

**Method:** To estimate the prevalence of smoking in young females in North Wales, UK, a two page bilingual survey was sent out to all 11–12 year old females in a total of 63 secondary schools, including special schools. In addition, five focus groups were conducted in areas with high levels of deprivation and high adult smoking prevalence. These focus groups were designed to explore in depth current knowledge, attitudes and behaviours in relation to smoking.

**Results:** Our research found that there is an average smoking prevalence of 2% in 11–12 year old females in North Wales, although this more than doubled in deprived communities. All participants in the focus groups were aware of a family member that smokes. We found that if parents smoke, children are more likely to start. Another finding was that girls with low aspirations that did not take part in sport or after school activities were more likely to smoke or use e-cigarettes. Most participants knew where to purchase e-cigarettes and they were aware that they contain nicotine. Young females felt that smoking was generally unappealing, especially due to the more superficial consequences such as impact on their appearance.

**Conclusion:** Anti-smoking campaigns should target both parents and young people; campaigns also need to focus on raising aspirations and confidence in young women and stand alone anti-smoking messages are unlikely to work; young females respond best when they perceive themselves or a family member being harmed by smoking.

## Abstract P-02

### Socioeconomic inequalities in cancer incidence in the West of Scotland: 2010–2012 compared to 2000–2002

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**Background:** Socioeconomic inequalities in health are well documented. This paper investigates the incidence of cancer in the West of Scotland region between 2000–2012, and examines whether socioeconomic inequalities in incidence changed

during a period when primary preventative measures targeted modifiable risk factors.

**Methods:** We employed the 2006 Scottish Index of Multiple Deprivation which divides Scotland into 6505 geographical datazones ranked by deprivation. We examined cancer rates (ages 50–79, excluding non-melanoma skin cancer) in those datazones located in the West of Scotland region grouped by Scotland-wide quintiles of deprivation. Counts for incidence and the population in each quintile were used to calculate age standardised incidence rates during 2000–2002, 2005–2007 and 2010–2011. We used the ratio of the incidence rate in the most deprived quintile compared to the least deprived (the inter-quintile ratio) to examine changes in the relative inequality in cancer rates.

**Results:** Incidence for all cancers combined was higher in the more deprived quintiles than the least deprived. In general, differences in cancer incidence by deprivation did not improve over time. Between 2000 and 2012 the inter-quintile ratio for all cancers increased from 1.39 to 1.43 in men, and 1.25 to 1.33 in women. Inequalities in lung, colorectal and head and neck cancers increased, but inequalities in stomach cancer decreased. For cancers in which the incidence was higher in more affluent areas – inequalities in prostate cancer decreased, while inequalities in breast cancer increased.

**Conclusions:** The concentration of deprivation within the West of Scotland region is unique within the UK. Using the Scotland-wide deprivation index the region's population is over-represented in the most deprived quintiles. We found no evidence to suggest that attempts over the past twenty years to target modifiable risk factors such as exercise, drinking and smoking have reduced socioeconomic differentials in cancer in this population.

## Abstract P-03

### HPV vaccine acceptance in males

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**Background:** Despite Human Papillomavirus (HPV)'s impact on the health of both sexes, there is debate around the inclusion of males in HPV vaccination programmes. The aim of this scoping review was to synthesize the evidence on vaccine acceptability to males. Given that the vaccine is most effective in adolescent males, vaccine acceptance in parents and health care professionals (HCPs) was also examined.

**Method:** A rapid synthesis using specified key words of published systematic reviews into vaccine acceptability in adolescent males, parents and HCPs was conducted. The most common electronic databases were searched including: Medline, EMBASE, PsychINFO, and CINAHL.

**Results:** There was variability amongst studies with respect to design and methodological approaches. Despite this there appears to be a positive attitude towards male HPV vaccination from both parents and older males. There is currently

participating in the national bowel screening programme. The campaign collateral included TV adverts, radio adverts, bus panels, press articles and adverts, field activity at high footfall areas such as football stadiums and shopping centres, social media and local targeted interventions in collaboration with NHS health boards. The campaign had a core audience of adults over 45 years C1C2DE with a skew to males with a call to action 'Don't get scared, get screened'. Audience tracking data has shown a significant increase in those agreeing that 'the best way to detect bowel cancer early is to use the home screening kit' (41% compared to 31% pre-campaign) and almost three quarters (73%) say they are very likely to do the test the next time they receive it, compared to 63% before the campaign. The campaign has contributed to a 80.6% increase in replacement kits requested each month since launch and more recently a 8.7% increase in kits returned during the latest period of campaign activity (October 2014). Validated data covering the first phase of activity has also shown an increase in overall uptake of the bowel screening programme of 1.2% nationally with larger increases observed in men in the most deprived communities (2.1% increase). The full impact of the campaign is anticipated to be even greater.

#### **Abstract P-07**

##### **Can a social marketing campaign have an impact on early stage breast cancer diagnoses?**

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The Detect Cancer Early (DCE) programme aims to improve the cancer survival rate in Scotland to amongst the best in Europe by diagnosing and treating cancer at the earliest stage. Breast cancer is the most common cancer in Scottish women with around 4600 people diagnosed each year, although five year survival rate is 85.9% there are still 1000 deaths from breast cancer each year. Our research highlighted that almost a quarter of women (45 years C1C2DE) check their breasts less than once a year and are unaware of symptoms of breast cancer other than lumps. Using a whole systems approach the DCE programme developed a social marketing campaign to educate women on the symptoms of breast cancer using images of real breasts. The campaign included TV adverts, radio adverts, press articles, field activity at high footfall areas such as bingo halls and shopping centres and local targeted interventions in collaboration with NHS health boards with the call to action 'Don't get scared, get checked'. During the campaign spontaneous awareness of breast cancer symptoms doubled and there was a 50% increase in women presenting to GPs with breast symptoms. A corresponding increase of around 50% was observed in referrals to secondary care breast clinics. Staging data for breast cancer for 2012/2013 compared to baseline 2010/2011 does not show any significant improvement in stage I diagnoses (38.8% compared to 38.4%). Corresponding data on breast cancers treated indicates 10% increase in numbers of breast cancers treated in Q2 2014 compared to pre-campaign period Q2 2012, not taking into account annual increases in incidence. A campaign to educate on breast symptoms alone has not contributed to earlier stage presentation at this time. Combining a symptoms based approach with promotion of the breast screening programme may enable increased early stage presentation to be realised.

#### **Abstract P-08**

##### **Ethnicity, deprivation and screening: an analysis of survival from breast cancer among screening-eligible women in the West Midlands diagnosed from 1989 to 2011**

Melanie Morris<sup>1</sup>, Laura Woods<sup>1</sup>, Nicola Rogers<sup>2</sup>, Emma O'Sullivan<sup>2</sup>, Olive Kearins<sup>2</sup>, Bernard Rachet<sup>1</sup>

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*Background:* Social inequalities in breast cancer survival have been found, but may be smaller when the cancer is screen-detected. We used new analytic techniques to examine survival from screen-detected and non-screen-detected breast cancer and investigate any disparities by ethnicity and deprivation.

*Methods:* Cancer registry data were linked with screening, ethnicity and mortality data for 20 283 women aged 50–70, diagnosed between 1989 and 2011, and invited for screening continuously. Self-reported ethnicity data were 90% complete, the remaining 10% imputed using name recognition software. We examined three ethnicity categories: Asian, Black and White; and deprivation groups based on the woman's post-code, grouped into categories of less deprived (quintiles 1 and 2) and middle/more deprived (quintiles 3–5). We estimated net survival corrected for lead time bias and for overdiagnosis, using newly-developed ethnic- and deprivation-specific life tables to correct for background mortality.

*Results:* No significant differences in net survival were found by ethnicity, after adjusting for deprivation. Survival by the extent of disease was similar for all ethnicities. Although survival was generally high, clear deprivation differences were found in five-year net survival: 90.0% (95% CIs: 89.3–90.8%) in less deprived groups and 86.7% (85.9–87.4%) amongst middle/more deprived women. Screening benefitted all ethnic and deprivation groups, but with no evident ethnic differences within screening categories. However, more deprived women had significantly poorer outcomes in both screening categories leading to a difference of 16 percentage points between the more deprived women who were not screen-detected (5-year net survival = 78.0%, 76.7%–79.2%) and the less deprived women who were screen-detected (94.0%, 93.1%–95.1%).

*Conclusion:* The three main ethnic groups differed little in their experience of breast cancer survival. While screening conferred a survival benefit to all, there were still wide disparities in survival by deprivation. Further research needs to be done to determine the underlying reasons for these differences and tackle them.

#### **Abstract P-09**

##### **Cancer Screening Programmes – public knowledge and beliefs in Northern Ireland**

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*Background:* In 2014 the PHA started developing a campaign on cancer awareness in NI. Part of the research undertaken to inform the direction of the campaign was a public survey on