UKACR/NCIN Annual Conference
17th June 2010

Cancer Inequalities in Wales challenges, actions and progress – a cancer registry perspective

Presenter: John Steward
Welsh Health Survey

- A survey of lifestyle and self-reported morbidity
- Stratified random sample of addresses within UA using PAF
- Interviews to household head
- Self-completed questionnaires
- Sample size $n=15,000$
Selected summary lifestyle statistics from the Welsh Health Survey 2007

- Binge drinker
- Don’t eat five a day
- Excess alcohol consumer
- Exposed to passive smoke
- Not exercising enough
- Obese
- Overweight or obese
- Smoker

Proportion of population
Health inequalities

- **Health inequality** - a measure of differences in health between populations.
- **Health inequity** - unfair or unjust differences in health between populations that are avoidable by reasonable actions.

- Adapted from the World Health Organisation, Commission for Social Determinants of Health and quoted in the Welsh CMO’s report 2007
Influential Reports on Health Inequalities

• Black Report 1980
• Whitehead Report 1987
• Acheson report 1998
• Marmot Report 2010
• All show similar findings of a gap between health of affluent and poor
Causation – different levels of study
Cellular – genome, environment
Individual – known risk factors - related to socioeconomic factors
Society – additional factors- precise identification and role unclear
Cancer inequalities Wales in Europe – Eurocare studies

- Wales survival is low for stomach, colo-rectal, melanoma, breast, prostate, ovary in Eurocare-3.
- Survival is also low in UK and Denmark.
- Wales survival for colon is improved in Eurocare-4.
Stomach RS at 5 yrs, 1990-1994
Stomach RS at 1 yr, 1990-1994
Cancer inequalities within Wales

- Incidence, mortality and survival
- Geographic variations by Unitary Authority, MSOA and LSOA.
- Urban – Rural variations
- Deprivation effects by WIMD 2005 (income domain) quintiles
- Changes over time e.g. periods 1993-97; 1998-2002; 2003-07
Quintiles (equal populations) in Wales using the WIMD 2005, income domain (number of LSOAs in brackets)
Wales Age Standardised Rates per 100,000 population
All Malignancies excluding NMSC, 1997-2006

Males

Females

<table>
<thead>
<tr>
<th>Rate Range</th>
<th>Males</th>
<th>Females</th>
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<td>481.05 – 537.19</td>
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Wales Age Standardised Rates per 100,000 population

Prostate Cancer

- 88.25 – 113.38
- 113.38 – 127.69
- 127.69 – 141.21
- 141.21 – 158.43
- 158.43 – 188.49

Female Breast Cancer

- 109.19 – 134.42
- 134.42 – 144.76
- 144.76 – 152.91
- 152.91 – 162.16
- 162.16 – 181.27
Wales Age Standardised Rates per 100,000 population

Lung Cancer, 1997-2006

Males

- 51.16 – 72.38
- 72.38 – 87.56
- 87.56 – 100.16
- 100.16 – 114.35
- 114.35 – 158.53

Females

- 34.14 – 45.63
- 45.63 – 55.37
- 55.37 – 64.50
- 64.50 – 76.47
- 76.47 – 96.56
Wales Age Standardised Rates per 100,000 population
Colorectal Cancer, 1997-2006

Males

Females

55.56 – 70.00
70.00 – 76.45
76.45 – 82.45
82.45 – 89.61
89.61 – 112.38

39.71 – 50.38
50.38 – 56.65
56.65 – 61.94
61.94 – 68.83
68.83 – 86.28
incidence all malignancy 1997-2006 in MSOA by deprivation

R\(^2\) = 0.118

R\(^2\) = 0.049
INCIDENCE - All Malignancies excluding NMSC

EASR per 100,000 population

Males

Females
MORTALITY - All Malignancies excluding NMSC

EASR per 100,000 population

Males

Females

Affluent 2 3 4 Most deprived

RELATIVE SURVIVAL
All Malignancies excluding NMSC

Males

Females

Relative Survival (%)

1 year 5 year
incidence prostate breast 1997-2006 in MSOA by deprivation

**prostate males**

R^2 = 0.049

**breast females**

R^2 = 0.035
Female Breast Cancer – rural to urban gradients for incidence and mortality in Wales for period 2003-2007
Prostate Cancer

EASR per 100,000 population

Incidence

Mortality
incidence lung 1997-2006 in MSOA by deprivation

**Males**

- Age standardised rate (WASR per 100,000)
- R^2 = 0.226

**Females**

- Age standardised rate (WASR per 100,000)
- R^2 = 0.238
INCIDENCE – Lung Cancer

EASR per 100,000 population

Males

Females
Lung Cancer – rural to urban gradients in incidence and mortality for Wales 2003-2007
incidence colon 1997-2006 in MSOA by deprivation

For males:
- $R^2 = 0.021$
- Age standardised rate (WASR per 100,000)

For females:
- $R^2 = 0.008$
- Age standardised rate (WASR per 100,000)

WIMD 2005 categories:
- Affluent
- Deprived

Graphs show the distribution of incidence rates across different WIMD 2005 categories for males and females.
INCIDENCE – Stomach Cancer (Males)

Incidence

Relative Survival

EASR per 100,000 population

Relative Survival (%)

Affluent 2 3 4 Most deprived


1 year 5 year
WAG policies/strategies

• Our Healthier Future (2009) – public health strategy for Wales
  – Action on inequalities
  – Focus on prevention
  – Health Intelligence

• Designed to Tackle Cancer 2
  – the revised cancer plan for Wales
Public Health Action

• Primary prevention – smoking cessation, obesity, diet, HPV vac
• Secondary – screening for breast, cervix and bowel
• Tertiary prevention – ICBMP, advice to CSCG
Background self reported smoking prevalence

Self reported smoking prevalence

Source: (Welsh Health Survey 2005/06)

Age group: 16-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+

Males
Females

Percent of population

Standardised self reported smoking

Source: (Welsh Health Survey 2005/06)

National Statistics Socio-Economic Classification

Higher managerial & professional
Lower managerial & professional
Intermediate
Small employers & own account
Lower supervisory and technical
Semi-routine
Routine
Never worked & long-term unemployed

Percent of adult population (standardised)
SSW outcomes 2007/08

Self reported quit rates

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CO validated quit rates

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Acknowledgements

• Public Health Wales
  – *WCISU stats - Ceri White et al*
  – WPHO Ciaran Humphrey, Nathan Lester
  – Screening – Hilary Fielder
  – SSW Mereid Bowley, Julie Bishop
  – Paul Tromans

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  – Cancer Lead Jane Hanson