The Economic Case for Prevention

Public Health Annual Research and Practice Conference
Wednesday 8th June, 2016

Dr Carolyn Harper, Director of Public Health
Overview

“An ounce of prevention is worth a pound of cure” .....Benjamin Franklin

A healthy population = A healthy economy

See www.gapminder.org

Key examples where the PHA & partners are improving health and generating cost savings
Health Improvement

- CVD mortality
- Tackling Primary risk factors for Chronic Disease – Smoking, Physical Activity, obesity
- Breastfeeding
- The Role for Legislation and Taxation – MUP of alcohol of 50p, 20 miles/hour speed limits
Deaths from CVD have more than halved 1995-2014

35% attributable to increased uptake of medication
60% to reduced risk factors: BP, cholesterol, smoking

Source: NISRA
Total cardiovascular deaths prevented or postponed, from 1987 – 2007, by age and sex

Total = 1,900 deaths prevented

Value = £3billion (over 20 yrs)

*VSL £1.7million

Smoking prevalence in Northern Ireland - the last decade (05/06-14/15)

Every 1% decrease in prevalence of smoking yields a cost saving of £7.5m in terms of healthcare costs and £19.6m to NI economy.

Source: Continuous Household Survey; 05/06-09/10. Northern Ireland Health Survey 10/11-14/15
Prevalence of overweight and obesity among adults (aged 16+) in Northern Ireland 1997-2014/15

<table>
<thead>
<tr>
<th>Year</th>
<th>Overweight/obese</th>
<th>Overweight only</th>
<th>Obese only</th>
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<tbody>
<tr>
<td>1997</td>
<td>56%</td>
<td>37%</td>
<td>19%</td>
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<tr>
<td>2005/06</td>
<td>59%</td>
<td>35%</td>
<td>24%</td>
</tr>
<tr>
<td>2010/11</td>
<td>59%</td>
<td>36%</td>
<td>23%</td>
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<tr>
<td>2011/12</td>
<td>60%</td>
<td>37%</td>
<td>23%</td>
</tr>
<tr>
<td>2012/13</td>
<td>62%</td>
<td>37%</td>
<td>25%</td>
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<tr>
<td>2013/14</td>
<td>61%</td>
<td>37%</td>
<td>24%</td>
</tr>
<tr>
<td>2014/15</td>
<td>60%</td>
<td>35%</td>
<td>25%</td>
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Strategy target: reduce overweight / obesity to 56%

Strategy target: reduce obesity to 19%
## CMO physical activity recommendations: UK comparisons

<table>
<thead>
<tr>
<th>Country</th>
<th>Met CMO physical activity recommendations (%)*</th>
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<tbody>
<tr>
<td>England (2012)</td>
<td>60</td>
</tr>
<tr>
<td>Scotland (2014)</td>
<td>63</td>
</tr>
<tr>
<td>Northern Ireland (2014)</td>
<td>53</td>
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* Current CMO (Chief Medical Officer) recommendations are 150 minutes per week moderate activity or 75 minutes vigorous activity or an equivalent combination of these. No data is presented for Wales as Wales are reporting on the pre 2011 recommendation: ie the percentage of the population doing at least 30 minutes of at least moderate activity on 5 or more days in the previous week.

**Source:** Northern Ireland Health Survey. Scottish Health Survey, Health Survey England, England and Scotland are calendar year surveys, Northern Ireland is a financial year survey 2013= 2013/14.
Tackling obesity & physical inactivity levels

- **Connswater Community Greenway** – ROI of 2-6 times over 40 years in terms of health, environmental and economic outcomes

- **Healthwise GP Exercise Referral scheme** – For every £1 invested, project generates a return of approx £7 in economic and social outcomes

- **£ for lb Challenge** - £2.51/kg of weight lost
Incidence (%) of breastfeeding in Northern Ireland, 1990 - 2010

Source: UK Infant Feeding Survey [www.ic.nhs.uk](http://www.ic.nhs.uk)
Opinion on breastfeeding protecting from disease (females only)

Source: Health Survey for NI, 2012-13

If UK rates of exclusive breastfeeding up to 6 months, increase by 10% = £6.5m UK healthcare cost savings/year
The Role for Taxation & Legislation

Examples

- Alcohol: MUP of 50p
- Road Traffic Collisions: 20 miles/hr speed limit
Admissions to HSC hospitals with an alcohol related diagnosis from 1999/2000 to 2009/2010

In NI, alcohol costs the health service £250million/year & £900million/year in total societal costs

Source: Alcohol use and alcohol related harm in Northern Ireland, Health Intelligence Briefing, PHA, 2011
Figure 8: Affordability of alcohol by type and source, 1987 - 2009

Estimated Impact of 50p MUP of Alcohol

63 lives saved & 2,425 hospital admissions avoided

Cost saving: £1.8m in yr1 and £397m over 20yrs

5,293 criminal offences & 35,000 days off sick avoided

Cost saving: £956m over 20 yrs
Road Traffic Collisions

789 killed or seriously injured on NI roads in 2014
39% of fatal collisions due to speeding
Cost of speeding in 2014: £262million

Source: Health Intelligence, PHA
Screening & Health Services
Colorectal Cancer Screening

- Approx. 7,764 people in NI living with bowel cancer = £20m/year spent on treatment costs
- Earlier diagnosis – increases survival and is less costly to treat

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<tr>
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<th>Lifetime treatment cost</th>
<th>5 year survival</th>
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<tr>
<td>Dukes A - EARLY</td>
<td>£12,455</td>
<td>&gt;90%</td>
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<tr>
<td>Dukes D - LATE</td>
<td>£25,703</td>
<td>&lt;10%</td>
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Colorectal Cancer Screening

- Of screen detected cancers in 2013/14 – 59% were at an early stage
- 648 participants had polyps detected and removed

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<th>Year</th>
<th>Pre screening</th>
<th>Post screening</th>
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<tr>
<td>2009</td>
<td>14%</td>
<td>22%</td>
</tr>
<tr>
<td>2013</td>
<td>23%</td>
<td>18%</td>
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Source: NICR
Health Protection
Health Care Associated Infections

*Clostridium difficile* infection rate for patients in the hospital setting, aged 65 years and older from 2006-2015
Health Care Associated Infections

*Clostridium difficile* infection rate for patients in the hospital setting, aged 65 years and older, from 2006-2015

Prevented:
- 3,263 CDI cases
- 719 MRSA cases &
- 537 Surgical site infections

Cost saving: £34m over 8 years
Rotavirus Vaccine

Cumulative rotavirus laboratory detections in NI by season/week

54% reduction in detections

Prevented:
1,000 Hospitalisations
1,362 ED attendances &
6,460 GP attendances

Cost saving: £1.1-1.2m over 2 years
Conclusion

• Public health = good economic investment
• Cross-governmental funding allows delivery of large scale interventions – PfG outcomes approach helpful
• Need action across the broad public health agenda to achieve the greatest population health gain
• When funding is tight (& even when it isn’t!), investment in prevention makes sense – for accountants & the public

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Acknowledgements

Editorial Team
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Partner organisations

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