

Financial savings due to smoking related cancer prevention in LSCCN

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Introduction

Smoking related cancers pose a significant burden on NHS finances. For health policy, planning and resource allocation it is important to have information on possible net savings from health programmes. In this study we analyse the data on smoking related cancers and NHS Programme Budget to estimate possible financial savings from prevention programmes.

Methods

The following steps were used to carry out the calculations:

- Cancers related to smoking were obtained from the WHO spreadsheets which are based on extensive global literature search
- Number of cases in population were obtained from NWCIS sources for LSCCN area (2006-08)
- Expenditure data was obtained from DH website on programme budgeting tools and data (2006-08)
- Cancers related to smoking were grouped according DH website on programme budgeting
- It was assumed that equal amount was spent on each of the cancers in the tumour group as expenditure was provided by groups
- Total DALYs for each cancer group were estimated by calculating cases and deaths for each DALY for smoking related cancers
- Cost per DALY was obtained dividing cost by total number of DALYs for a group
- Smoking related DALYs avoided were estimated using WHO spreadsheets
- Cost saved per group were estimated by multiplying DALYs avoided with cost per DALY
- All the cost added together to get total saving from smoking cessation (cancer related)

Results

Lung cancer is the biggest burden with high very YLL due to high case fatality rate. As expected majority portion of DALYs is due to YLL.

The cancer associated with smoking in the LSCCN cost NHS more than £70 million per annum. If smoking was stopped entirely, more than 3000 cases and deaths combined could be averted equivalent to >18000 DALYs. In terms of monetary value it equals to >£15 million per annum of savings. The Stop Smoking Services (SSS) spends nearly £3 million each year on service seekers to quit smoking with a 4-week quit success rate of 45% across LSCCN.

Table 1: Smoking related cancer burden each year

Cancer Group	Cases	Deaths	YLD	YLL	DALYs
Head and neck	159	53	85	1077	1162
Upper GI	720	628	198	8414	8612
Lower GI	957	431	610	5528	6138
Lung	1102	958	305	13641	13946
Skin	261	46	63	936	999
Breast	1193	306	699	6517	7216
Gynaecological	450	184	183	3094	3277
Urological	1358	380	962	3645	4607
Haematological	452	232	176	3379	3556

Fig1: Burden of cancer with and without smoking

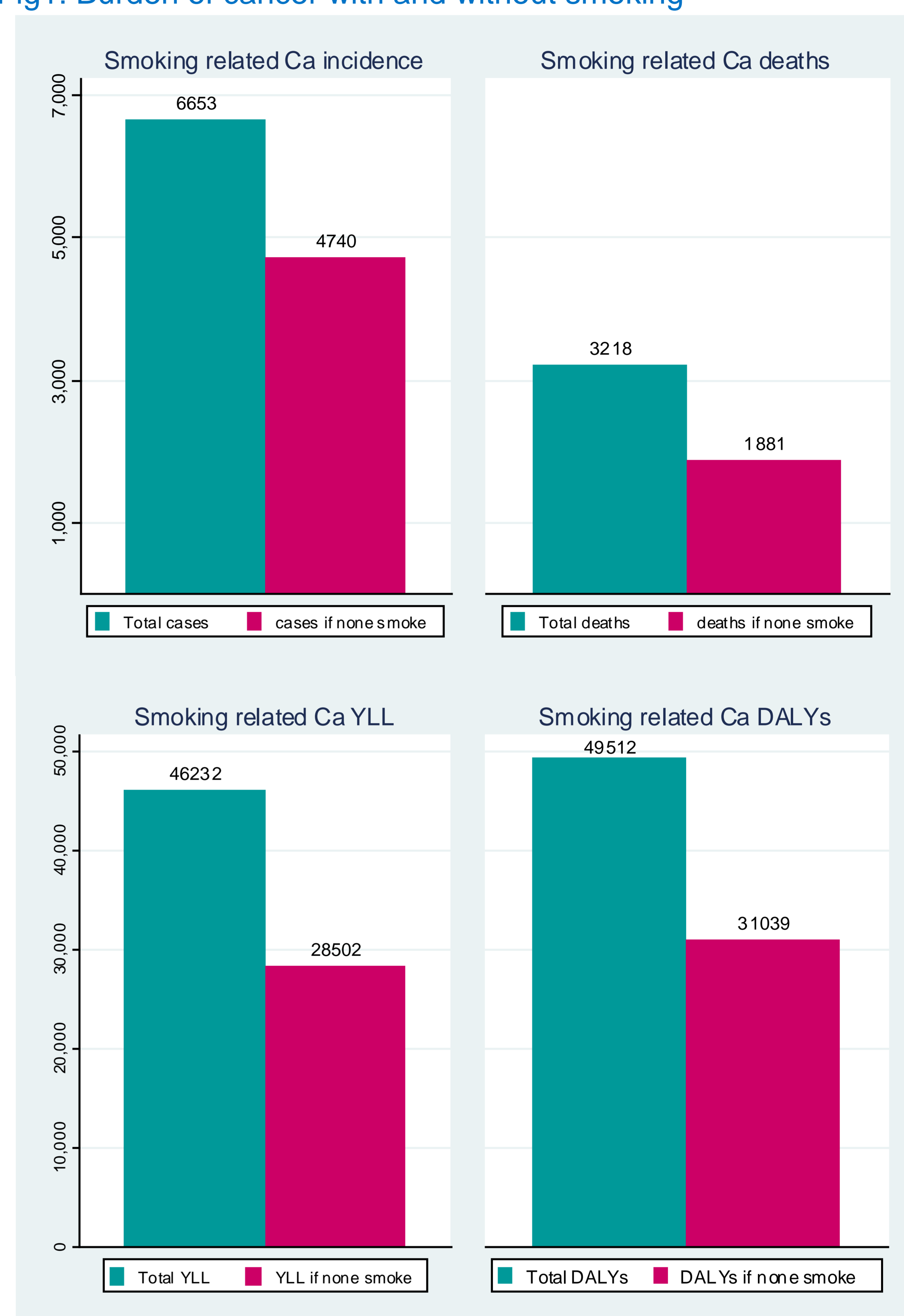


Table 2: Annual cancer, deaths, expenditure and savings in LSCCN

Cancer group	Cases & deaths	DALYs	DALYs avoided	Expenditure (£000)	Cost per DALY	Cost saved (£000)
Head and neck	347	1,925	789	4,542	2.39	1,813
Upper GI	1,420	9,070	3,417	6,900	0.76	2,600
Lower GI	2,206	9,758	781	10,717	1.10	858
Lung	2,060	13,944	11,379	6,537	0.47	5,335
Skin	307	998	73	3,162	3.17	231
Breast	1,499	7,214	285	8,820	1.22	348
Gynaecological	701	3,629	201	4,872	1.34	270
Urological	1,992	5,279	1,161	12,764	2.42	2,808
Haematological	893	4,643	416	11,706	2.52	1,048
Smoking (cancers)	11,524	50,276	18,722	70,021		15,354
All cancers	12,304			142,692		

Conclusions

The cost of cancer treatment is over 2000% (>23 times) the investment on SSS. The potential return on the investment in SSS is 5-times the investment cost. These savings are only for cancers, hence a gross underestimation of overall savings. Further research is needed to focus on how to enhance the uptake to maximise the effectiveness of interventions through appropriate targeting.