

Public Health interventions – the Case for Prevention

1. Summary

- 1.1 Health & Adult Social Care Scrutiny Committee requested a report identifying the amount spent on preventative actions and the amount spent on related treatment, in order to consider if there is a relationship in terms of the proportion of resources allocated.

2. Recommendations for discussion

- 2.1 Prevention is a complex subject. This overview paper begins to outline some of the key areas for public health and should be viewed as a starting point for potential further discussion. More detailed information can be provided on specific topics if required by Scrutiny Committee.
- 2.2 The Southwark Health and Well Being Board is in the process of being (re)established. This senior level Board will be Member led and include key partners across the Council and NHS.

The Board will be developing the Joint Health & Well Being Strategy for Southwark. This will be a high level strategic framework setting out the direction for health and well being. Scrutiny may wish to request that the H&WB Board:

- Ensure that prevention is one of the priorities in the HWB Strategy
 - Recognizes that inequalities in prevention, service use and health outcomes exist and that the JHWB Strategy must clearly address the health inequalities in Southwark.
 - Consider that mental wellbeing is integral to health and to encourage the promotion of mental wellbeing in the JHWB Strategy.
- 2.3 Individuals and communities must take more responsibility for their own health. Scrutiny may wish to also consider advocating for an asset based approach to prevention in the JHWB strategy which may help identify and unlock the resources in the communities.

3. Background

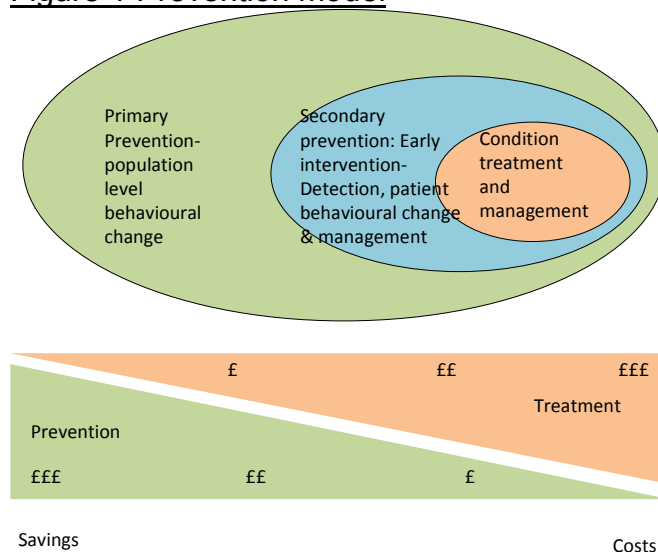
- 3.1 The term 'prevention' refers to interventions that prevent rather than cure or treat disease. For the purposes of this report, we can consider prevention as:
- primary prevention
 - secondary prevention
- 3.2 Primary prevention aims to prevent disease. Most health promotion and behavioural change interventions fall within this category eg

healthy eating, physical activity, smoking cessation and other tobacco use, alcohol, safer sex, drug misuse and safer sun. It is important to recognize that mental wellbeing underpins much of effective or unsuccessful behavioural change and indeed can be a driver for 'unhealthy behaviors' for eg alcohol misuse, over eating and other 'stress related behaviours'.¹

3.3 Secondary prevention, also referred to as 'earlier intervention', aims to diagnose and treat an existing disease in its early stages before it results in significant morbidity. Earlier diagnosis and treatment potentially improve outcomes through treating disease earlier and ensure greater treatment options are available. Examples include breast, cervical and bowel screening, cancer symptom awareness for a range of conditions (eg testicular, prostate), 'case finding' through development of GP chronic disease registers (eg diabetes, hypertension, chronic obstructive pulmonary disease - COPD) and earlier detection of HIV. In addition to the management of a condition with medication or clinical interventions, a good treatment plan will include health promotion and behavioural change. For example, a healthy diet and physical activity alongside appropriate medication, will play a major part in effectively managing and slowing the progress of diseases such as diabetes and hypertension and similarly, smoking cessation and exercise can be important aspects of managing chronic obstructive pulmonary disease (COPD). For communicable diseases, such as HIV, diagnosis and treatment will also reduce transmission.

Figure 1 below illustrates the model for prevention, savings and costs. There is no agreed formula for how much should be spent on prevention relative to costs of treating ill health, although many prevention activities are considered cost-effective. Some of this evidence is summarized in Table 1.

Figure 1 Prevention model



¹ Department of Health (2011) No health without mental health

4. Case for prevention

4.1 There is a very strong case for primary prevention. Table 1 below summarises the Southwark investment for some of the key areas for prevention. Some of the related evidence for effectiveness and cost effectiveness is included in the table.

Table 1 Southwark investment in prevention

Area	Programme / activity	£ ,000	Effectiveness & cost effectiveness
Screening	Breast	501	<ul style="list-style-type: none"> Reduction in breast cancer mortality of about 35% in women who are regularly screened Assuming 75% of invited women of 50–70 years of age are screened, estimated 1400 lives saved in England²
	Cervical	369	<ul style="list-style-type: none"> Cervical screening in women 20–24 years of age has little or no effect on rates of invasive cervical cancer up to the age of 30 years. Screening older women is very effective and leads to a large reduction in incidence and mortality from cervical cancer³.
	Bowel	433	<ul style="list-style-type: none"> Cancer mortality was reduced by 16% in populations offered screening compared with populations not offered screening.⁴
Smoking	Smoking cessation service	200	<ul style="list-style-type: none"> Smoking causes 317 deaths in Southwark⁵

² NHS Clinical Knowledge Summaries http://www.cks.nhs.uk/breast_screening/evidence

³ NHS Clinical Knowledge Summaries

http://www.cks.nhs.uk/cervical_screening/evidence/supporting_evidence/screening_related_to_age

⁴ Cochrane review 2007 Hewitson, P., Glasziou, P.P., Irwig, L. et al. (2007) *Screening for colorectal cancer using the faecal occult blood test*

⁵ Source: 'Health profile 2011: Southwark'. APHO 2011

cessation			<ul style="list-style-type: none"> • Every pound spent, saves £4⁶ • Each smoker giving up gains 3.6 life years; giving up at 30, you gain 10 years⁷
Obesity	Health promotion and community nutritionists Weight mgmt (Health Checks) MEND family intervention	215	<ul style="list-style-type: none"> • Estimated costs in Southwark of treating diseases related to overweight and obesity £86.1 million in 2010 and £92.1 million in 2015⁸.
	Health Promotion Exercise on Referral + cardiac rehab phase 4 (condition management and secondary prevention)	165	<ul style="list-style-type: none"> • Supporting inactive adults (approx 47% of adult pop) to achieve recommended 30mins x 5 days physical activity could generate upto £10m in savings for Southwark⁹
Health checks	NHS Health Checks <ul style="list-style-type: none"> • Including physical activity, motivational interview hub, glucose intolerance 	232 100	<ul style="list-style-type: none"> • For every £1 spent on NHS Health Checks, £11 saved. Savings arise from costs of treating heart disease, stroke, diabetes and kidney disease¹⁰
Mental health	Mental health promotion BME mental health promotion Psychological therapies (management of conditions as well as secondary prevention)	45 70 3.5M	<ul style="list-style-type: none"> • Mental illness during childhood and adolescence results in UK costs of £11,030 to £59,130 annually per child¹¹ • Suicide training for GPs saves £44 for every pound while

⁶ Bernstein H, Cosford P and Williams A. 'Enabling effective delivery of health and wellbeing – an independent report' Dept of Health 2010

⁷ HM Government. 'A smoke free future – a comprehensive tobacco control strategy for England' DH 2010.

⁸ Department of Health 2008 Healthy weight, healthy lives: Toolkit for developing local strategies

⁹ Department of Health 2009 Be Active, Be Healthy: A Plan for Getting the Nation Moving

¹⁰ Department of Health 2008 Putting prevention first: Vascular checks risk assessment and management - impact assessment

¹¹ Suhrcke M, Pillas D, Selai C (2008) Economic aspects of mental health in children and adolescents. In Social cohesion for mental well-being among adolescents. Copenhagen: WHO Regional Office for Europe

			<p>bridge safety barriers save £54.</p> <ul style="list-style-type: none"> For every pound invested in workplace health promotion programmes nearly £10 is saved (reduced costs of stress and sick days)¹²
Sexual health	Chlamydia	100	<ul style="list-style-type: none"> Frequency of chlamydia infection highest in under 25s; RCTs show reductions in the risk of pelvic inflammatory disease of women screened¹³
	Sexual health promotion training	132	<ul style="list-style-type: none"> Focus of SH training is on supporting roll out and promotion of HIV testing in primary care and SRH clinics. Southwark's prevalence is 7x higher than UK; half of newly diagnoses cases are diagnosed late and quarter very late.
	HIV incl condom & pan London prevention	419	
Alcohol	Brief interventions in primary care (DES & LES)	TBC 2	<ul style="list-style-type: none"> Screening and brief intervention in primary care for alcohol misuse saves nearly £12 for every pound invested
Substance misuse	Mostly secondary prevention (eg needle exchange & reoffending)	1.4M	<ul style="list-style-type: none"> For every £1 spent on prevention, £3 is saved to health and crime services¹⁴

5. Realising savings

5.1 Although there is a very clear case for investing in prevention and evidence based models for estimating the associated costs of

¹² Knapp, Martin and McDaid, David and Parsonage, Michael (2011) Mental health promotion and mental illness prevention: the economic case. 15972. Department of Health, London, UK

¹³ <http://www.chlamydiaSCREENING.nhs.uk/ps/evidence/index.html>

¹⁴ National Treatment Agency Value for Money Toolkit

treatment and care for preventable diseases, the realisation of savings specific to interventions is problematic. Intervention at a population level poses a number of issues which makes the realization of direct savings difficult. For example,

- the population itself is not stable ie people move in and out of Southwark, thus the 'subject' of intervention changes.
- at an 'individual' level – personal differences will impact on the effectiveness of behavioural change (eg different values, different cultural beliefs, peer influence, changing circumstances eg unemployment)
- the quality of the delivery of interventions themselves will impact on effectiveness eg quality of training, quality of administrative systems eg call and recall

5.2 Recently, Social Impact Bonds have been suggested as a means to potentially realize savings for investment in early intervention or prevention. This is currently being trailed in some boroughs^{15,16}. It is still too early to assess the effectiveness of SIBs.

6. Cost of ill health

6.1 Table 2 below shows the estimated financial costs of treating disease by Programme Budgeting categories (a Department of Health approach to categorizing disease spends). It is important to note that not all health conditions can be attributed to preventable risk factors, for example, some heart conditions can be congenital and family history increases the risk for some cancers.

6.2 More importantly, the financial costs must be considered alongside the human cost of 'early deaths' (ie deaths under 75 years). In Southwark, in 2009 there were 205 early deaths due to cancers (35%) and 133 (23%) due to circulatory diseases¹⁷. Lung is the largest category of cancer deaths (about a quarter of total cancer deaths in Southwark). Smoking and unhealthy weight are key amendable factors for cancers and circulatory diseases. Smoking is estimated to cause about 80% of lung cancer deaths, 18% of coronary heart disease deaths, and 11% of stroke deaths. It is a major risk factor for other cancers (eg mouth, throat, liver, pancreas, bladder, cervix and bowel – they account for about a third of Southwark cancer deaths)¹⁸. Unhealthy weight is a key risk factor for hypertension and type 2 diabetes, both of which are risks for circulatory diseases. Weight itself, independent of co-morbidities (eg diabetes and hypertension), is now considered to be an independent risk factor in fatal heart disease¹⁹.

¹⁵ <http://www.socialfinance.org.uk/>

¹⁶ Hammersmith & Fulham, Westminster and in Birmingham and Leicestershire
<http://www.guardian.co.uk/society/2011/aug/26/big-society-social-impact-bond>

¹⁷ Southwark Annual Public Health Report 2010

¹⁸ *ibid*

¹⁹ <http://heart.bmj.com/content/early/2011/01/24/hrt.2010.211201.abstract>

Table 2 Costs of treating disease

Some associated health behaviours [1]	Programme budgeting category (09/10) From DH Programme Budgeting PCT benchmarking Toolkit 09/10 v1	
Smoking, other tobacco, some foods, sedentary behaviours	Cancers & tumors [1]	£27.7 M
Obesity, healthy eating, sedentary behaviour, smoking	Circulatory disease [1]	£32.2 M
Smoking, seasonal flu	Respiratory disease [1]	£24.6 M
	Mental health [1]	£93.0 M
Safer sex	Genito urinary [1]	£36.2 M

Note [1] Not all disease is preventable through change in health behaviour.