Value for Money in Social Marketing

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Outline for your day

09:30 - 10:00   Registration and refreshments

10:00 – 10.30   Understanding Value for Money

10.30 – 11.00   The NSMC VfM Programme

11:00 - 12:00   A framework for evaluation

12:00 - 12.30   How the VfM tools work

12:30 - 13:00   Lunch Break

13:00 - 14:00   Using the VfM tools

14:00 - 15:00   Making the Case

15:00 - 15:30   Refreshment Break

15:30 - 16:00   Reflections and lessons

But this is your day so lets start with some introductions
Please share what you have learnt about VfM in this field
And your learning objectives for today?

Understanding Value for Money:
What does VfM mean to you?

VfM analysis can mean:

- Cost Offset ~ cost per £ saved
- Cost effectiveness ~ cost/ outcome
- Cost consequences ~ cost/ outcomes
- Cost-utility ~ cost/weighted outcomes
- Cost benefit ~ cost/ £ economic value
- Social Return on Investment ~ social cost per value to society valued

We can use each of these methods

- If objective is simply to save money
- If one clear health objective
- If several different objectives
- If relative values are clear
- If economic values can be established
- Where social costs and values are clear or can be valued by consensus

Health outcomes are most often measured as QALYs
Quality Adjusted Life Years =Years of life gained x perceived quality

What does VfM mean
in relation to health and wellbeing?

Public Health:

"The science and art of preventing disease, prolonging life and promoting health *and equity* through the organised efforts *and informed choices* of society, *organisations, public and private, communities and individuals*"

Acheson modified by Wanless and Marmot

- Health gain - years to life and life to years

- Health engagement – social capital

- Reducing health inequity and inequality

- But always with good value for money

In practical terms:

- Marginal productivity of the NHS is about £25,000 /Quality Adjusted Life Year (see later) But most Behaviour Change > £10,000/ QALY

- Quality Adjusted Life Expectancy is about 5 years less than average for the most deprived

	Women		Men	
Year	1981	2001	1981	2001
LE	76.8	80.4	70.9	75.7
HALE	66.7	68.8	64.4	67.0
%	86.9	85.6	90.0	88.5

Life expectancy increases by ~ 2 years every 10 years but healthy life expectancy increases at ~1 year every 10: what does this mean for the NHS

Health and Efficiency

Value for Money is a product of two factors "Technical efficiency" describes how products and services are delivered at lowest cost and "Allocation efficiency" describes how resources are allocated to maximise the total value of output

- The economy improves efficiency by 2% p. a. by shifting to "high value added" services

    - Agriculture → Manufacture → Financial Services

- Health care costs rise ~ 3 - 4% above inflation
  - Aging and population growth adds ~1%
  - Consumer expectations add ~1%
  - Salaries increase account for ~1%
  - Medical technology adds ~ 1%
  - Less technical efficiency gain ~ ½% at best
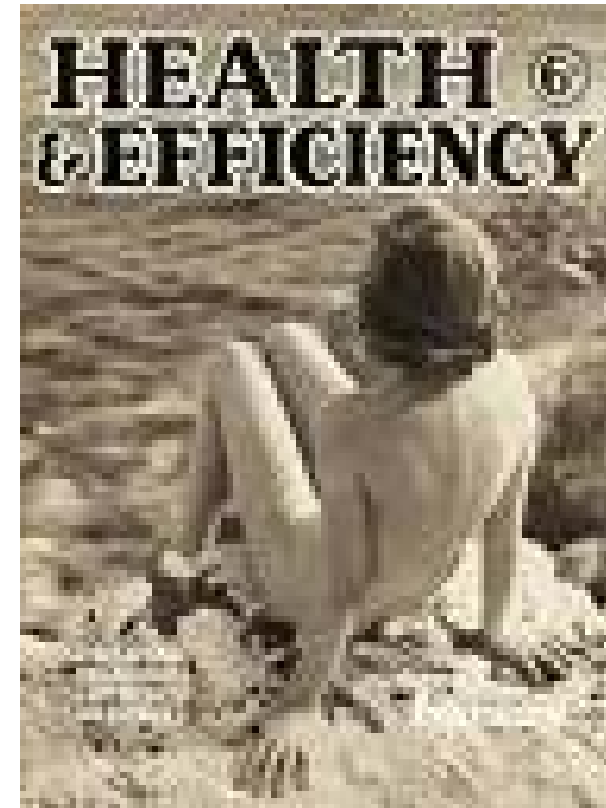
How can we improve the efficiency and hence VfM of the NHS Treatment→ Self Care → Prevention

Why is VfM analysis difficult for social marketing?

Evidence is often weak for:

- Effects of a particular intervention

- What behaviour change is achieved

- The extent of behaviour change

- How long clients will persist

- Outcomes that arise many years later

- What it means to clients

- The full costs and consequences

For these reasons we need:

- To be clear about the context

- Indicators of behaviour change

- To combine evidence and experience

- To consider long term outcomes

- To look for unintended consequences

- To apply clear costing assumptions

- To estimate ranges of VfM

You have to describe behaviour change in order to measure its outcomes.

Social marketing must be effective if it is to achieve VfM

Effective Social Marketing demands:

- Customer orientation

- Insight into the process

- With clear behavioural goals

- Well thought through market segmentation

- Understanding of the exchanges involved

- Using an appropriate mix of methods

- A clear theory of behaviour change

VfM must be considered at every stage:

- During the scoping of a project

- In development in a business plan

- During implementation

- In evaluation

- And in follow up and dissemination

- Recognising uncertainty at every stage

- Social Marketing is a learning process

Consult the NSMC web site and read "Social Marketing and Public Health" Jeff French, Clive Blair-Stevens, Dominic McVey, Rowena Merritt OUP Also review the Introduction to Behavioural (Health) Economics

The NSMC VfM Programme

- One year to answer the questions

- What is behaviour change worth?

- In terms of health and value to society

- We were advised by an expert panel
  - Fiona Adshead, Julian Legrand, Mike Kelly, Richard Little, Ian Basnett, Robert Anderson.

- Delphi review of 50 experts and users

- NICE team advising on costs

- We reviewed current advice from
  - NSMC, NICE,LGID, COI ,CO
- And best practice from
  - KF, HELP, AP ACE, NICE, DH
- They all showed similar methods
  - Consult stakeholders/ target group
  - Model cause and effect
  - Estimate the cost of intervention
  - Estimate outcomes
  - Compare NPV of costs and outcomes
- Which just leaves one question

  – How?

The NSMC VfM Programme

- Delphi review told us experts want
  - Many different outcome measures
  - And very complex answers

- Users/ practitioners told us they want
  - A consistent answer how much is it worth
  - A simple answer

- All say we must consider
  - Capital and revenue costs~ to all
  - Persistence of change ~ social capital
  - Health impact ~ age
  - Cost to NHS and LAs and Gov
  - Cost to employers and clients
  - Societal value and impact on equality

- They also told us it is vital to connect
  - Research to practice
- They do not need any more guidelines
  - They need local evaluation tools
- They cannot wait for long term research
  - They want answers now
- And they want consensus
  - From experts and authorities
- LAs want their own local evaluation tools
  - Not one size fits all answers

- ## This is a revolution

The NSMC VfM Programme

- So we built a set of evaluation tools

- Based on best available evidence

  – From NICE, WHO, Research teams

- We know the tools are not perfect

- But they are the best available

- Based on clear assumptions and data

- And can be updated

  – By research and consensus

- To connect Research to Practice
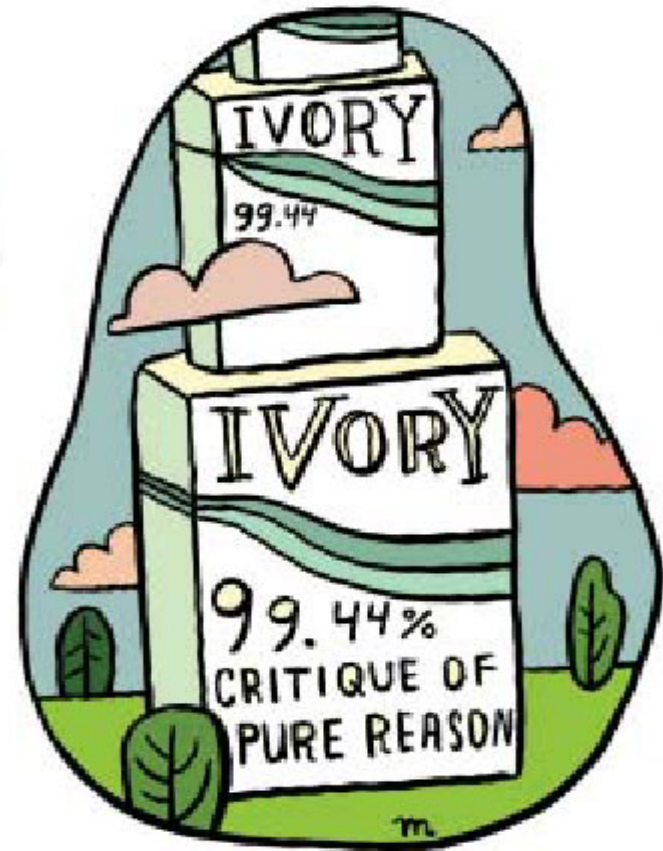
A Framework for Evaluation:
Steps in VfM analysis

1. Identify stakeholders and agree objectives

2. Describe expected process and outcomes

3. Establish measures of costs and benefits

4. Estimate long term impacts

5. Consider how to deal with equity

6. Make sure you have the data

7. Apply the VfM tool to produce analysis

8. Balance qualitative and quantitative evidence in the evaluation report

1. Identify the stakeholders and agree objectives

You need to understand the stakeholders and their objectives:

- To improve long term health/wellbeing

- To reduce inequality

- To reduce long term costs to Gov/NHS/LA

- To reduce long term costs to clients

- To improve social capital

- And other specific goals

Engage them in the process and understand their perspectives

And to consider how objectives will be assessed and measured:

- Long term health and wellbeing ~ QALYs

- Impact on most deprived 20% ~ IMD

- Long run cost savings ~ NPV

- Reduced long term expenditure

- Access to services/group membership

- Other

Make sure that measures are accepted and understood

Lets talk about the stakeholders you may wish to engage and how to set out objectives in a social impact matrix and an impact map
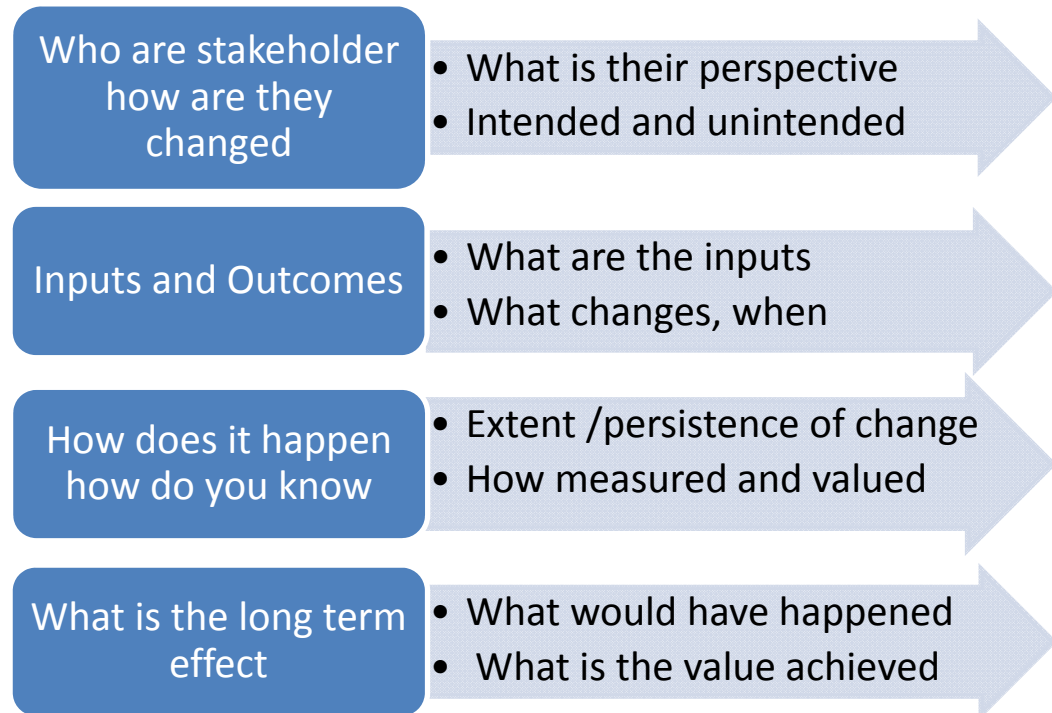
2. Describe the expected process and outcomes: Impact Map

This is a structure way of reviewing the process of change and its outcomes:

- Who is involved, how?

- How does change happen?

- What changes, when?

- How can changes be measured?

- Compare with next best?

See "A guide to Social Return on Investment" available at
www.thesroinetwork.org

Who are stakeholder how are they changed	• What is their perspective • Intended and unintended
Inputs and Outcomes	• What are the inputs • What changes, when
How does it happen how do you know	• Extent /persistence of change • How measured and valued
What is the long term effect	• What would have happened • What is the value achieved

A Social Impact Matrix

Objectives › Stakeholders ∨	Improved Health and Wellbeing	Reduced inequality	Improved social capital	Reduce long term costs
1. Local Authorities	Improved wellbeing QALY gain	Disadvantaged and Hard to reach % IMD	Membership of community groups	Reduced social care and other service costs
2. NHS	Improved health status QALY gain	Reduce health inequality % IMD	Better use of NHS services more participation	Reduced NHS costs from associated conditions
3. Other Government	As above	As above	Improved employment	Tax, benefit, excise and VAT impacts
4. Clients	Improved personal health status	Access for disadvantaged and hard to reach	More opportunities to participate and community support	Employment income Less expenditure on addictive products and informal care
5. Community	Better access to health and care	Wider participation	Increased volunteering	Opportunities for cost sharing
6. Employers	Reduced sickness and absenteeism	Less long term sickness	Improved staff relations	Less costs of replacing staff better productivity

3. Measures of costs and benefits:
QALYs: IMD : NPV

QALYs: Quality Adjusted Life Years:

- Long term years of life gained
  - weighted by patients between 0-1 (0 = death) for quality of life
  - Future QALYs are discounted
- EuroQol- 5D based on patient assessments of
  - mobility, self care, usual activities, pain/discomfort and anxiety depression and overall health

IMD: Index of Multiple Deprivation:

- Area measure of deprivation most deprived 20% in terms of:
  - income, employment, health, education, housing, crime and the living environment

NPV: Net Present Value

- The current value of a stream of benefits or costs discounted at the social time preference rate of 3.5%

Measures are defined in the Glossary: lets discuss them in more detail

4. Short term change vs Long term behaviour

After short term change

- 1 year latter only 14.5% of 4 week quitters will still be quitters

- In following 10 years only 90% p.a. will persist as non smokers

- They will recover health only slowly depending on age older people will never recover full health

- For smoking the evidence shows this

Similar assumptions need to be made for alcohol misuse, obesity and other behaviours but with less evidence

There is an urgent need for better data on short and longer term persistence and health recovery rates.

- In the meantime we have to rely on consensus views of practitioners

- Persistence can be increased e.g. by: reinforcement, social capital - support groups, policy measures -pricing and environmental measures - smoke free areas and reduced by peer pressure, advertising and commercial pressures

- Health recovery depends on age and other aspects of health behaviour

Short term change has only a limited impact unless it is supported

Age and Health Recovery: from Smoking

- Young smokers recover rapidly after they stop smoking but

- Age 50 and older smokers recovery more slowly and to a lower level of health

- There is an urgent need for better evidence of health recovery from alcohol and obesity

- From Doll R, Peto R, Boreham J, Sutherland I. "Mortality in relation to smoking: 50 years' observations on male British doctors"
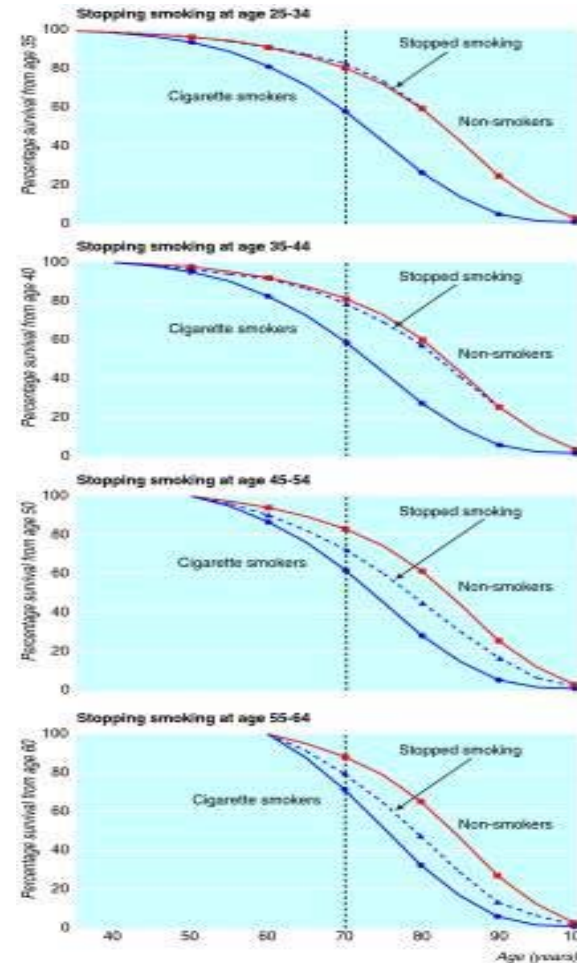
4. Long term behaviour vs health outcomes

Long term behaviour affects health risks and long term health outcomes

- To estimate probable health impacts we draw on the WHO National Burden of Disease Tool applied to UK outcomes

- This shows the relationship between behaviour and outcomes

- But outcomes today reflect behaviour over 40 years so we apply average levels of risk behaviour over this period

- This gives a theoretical estimate of the impact per year of health risk behaviour

These estimates can be improved but provide a starting point

- As the WHO Tool uses DALYs we have to convert to QALYs

- The WHO tool applies Population Attributable Fractions for high income European Countries and have to be adapted from UK to England

- HPA developed a similar model for the UK in 1996 but this was discontinued

- It would be possible to develop better estimates of long term health impacts

WHO National Burden of Disease Applied to UK

This is an extract from the WHO National Burden of Disease Tool

- The tool shows outcomes for age/sex cohorts by causal factors and provides estimates of DALYs, YLD and YLL

- DALYs can be converted into QALYs using Franco Sassi "Calculating QALYs, comparing QALY and DALY calculations"

- This is an approximation

Leading causes of DALYs due to selected risk factors in the UK 2004

Persons	% total DALYs
1Tobacco	12.6
2 Alcohol	8.3
3High blood pressure	8.3
4High cholesterol	6.4
5High BMI	6.1
6Physical inactivity	2.9
7Illicitdrugs	2.5
8Low fruit and vegetable	2.0

5. Valuing Equity Impacts

You could give extra value to outcomes for disadvantaged people

- By setting your own extra value or

- Using Health England Leading Prioritisation formula:

- $U = e(-0.0000586 \times C + 0.0435987 \times R + 0.119895 \times D)$

  U=Utility, C=cost per QALY, R= Reach, D=Disadvantage

- This is a preference curve generated by a survey of 99 public health experts, the Tool uses this to generate a weighted outcome

DH advice is not to weight outcomes but consider this as a separate issue:

- See Health Inequalities Intervention Toolkit : The London Health Observatory

- Or just describe the impact and take it into account as a qualitative factor

Discuss arguments for and against weighting for disadvantage

Time to try this out as we think through a qualitative analysis

If you have a case study at your table please talk through the issues we have discussed so far:

- Is the project likely to be effective

- Who are the stakeholders ?

- What are their objectives?

- Describe the process of change

- What outcomes are expected?

- How will you address equity?

If you don't have your own case study we have one for you but you will have to ask us the right questions.

- Apply NSMC Benchmark Criteria

- How you would engage them

- Produce a social impact matrix

- And an impact map

- Describe outcomes measures

- Describe equity measure or process

Is the project likely to show good VfM? How could you reduce costs and improve value? What are the main unknowns and uncertainties?

6. How the NSMC VfM Tools work:
## An introduction

NSMC Tools are currently available for the fields shown here. Obesity considers the effects of Weight Management, Fruit and Vegetable and Activity improvement

They were developed with the help of NICE, Health England, WHO, DH, leading health economists, commissioners and social marketing practitioners, centres of excellence and leading voluntary sector organisations.

They are based on the best current evidence and reasonable assumptions

We hope they will be extended to further fields and improved with further evidence.

Smoking

Alcohol

Obesity

Bowel Cancer

Breast Feeding
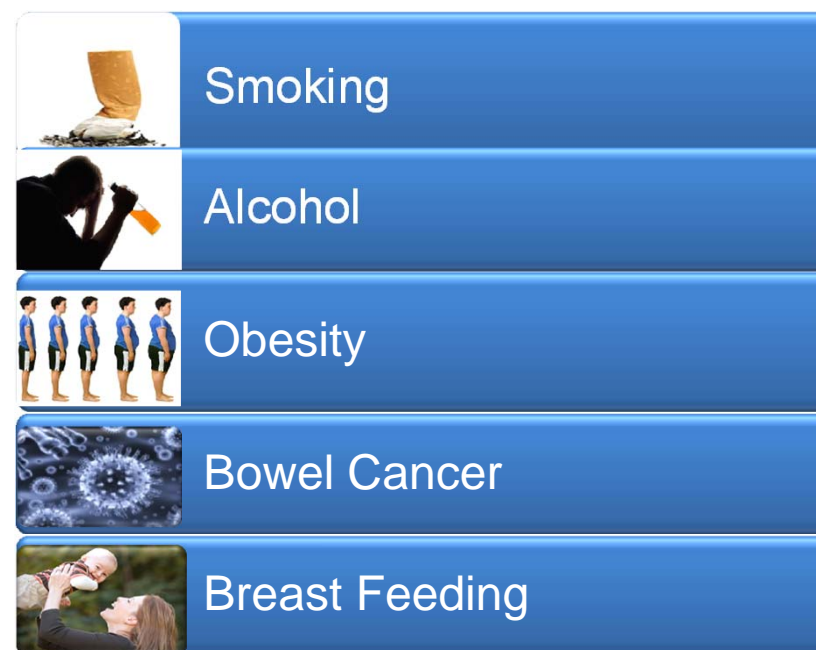
Download tools from http://thensmc.com/resources/vfm

How the NSMC VfM Tools work:
Basic Principles

The tools compare the capital and revenue costs of an intervention with the net present value of its impact on all stakeholders. Taking into account:

a) The costs to all stakeholders

b) The number of people contacted and % changing their behaviour

c) Expected duration of changed behaviour (persistence), time to recover health (health recovery rate)

d) The base case i.e. What would happen without intervention

e) The effects of changes on long term health (Burden of Disease)

f) Impact on the costs of health, social care and other relevant services

g) Impacts on clients' lifetime income and expenditure including informal care

h) Impacts on employers from reduced absenteeism and better productivity

i) Impacts on Government

j) The value placed on outcomes and social rate of return in terms of the net impact on societal costs and benefits

In each case we look at a range of possible outcomes

7. Time to try this out: Entering Data and Reviewing Results

You will follow the details better if you open up a copy of the NSMC Tool most relevant to you and enter your data as we go through it, you need:

- A case study for each table?

- A relevant version of the Tool?

- Any problems before we start?

If you don't have your own case study we have one for you.

Don't just feed in numbers by rote

Make sure you think through what they mean and how you could obtain similar data.

To sharpen this up we may give you some misleading data - watch out.

This is complex so stop me if you need more detail

Cost estimates, Client contacts and behaviour change

a) Costing guidelines are provided by NICE on the NSMC VfM web site:

- Enter capital and revenue costs for the Commissioners, NHS, other public sector providers, clients (who may receive incentives i.e. negative costs) and/or employers or other partners

- Capital costs are spread over the life of the project, so you need to enter the number of years the project will run

- VAT if paid should be ignored

- Cost estimates are priced at the base year - the year of the outcome data

b) Client contacts and behaviour change

- Client contacts - all relevant clients

- Client characteristics – age, % in most disadvantaged quintile etc

- For Smoking and Obesity percentage of clients showing changed behaviour may include multiplier effects, if there is clear evidence of behaviour change

- For Alcohol, Bowel Cancer, Breast Feeding expected behaviour changes will be generated from benchmark studies

- Reach and % Employed may be input

Long term Behaviour and Health Recovery

c) **Data entry may record the short term behaviour change but we need to make assumptions about long term persistence**

- Smoking evidence of first year 14.6% and long term persistence 90% p.a.

- Alcohol: persistence at one year 1.4% - 7.6% -0.5% based on case studies long term persistence 90% p.a. assumed

- Obesity persistence rate can be varied a starting point is suggested based on age

- Breast Feeding uses evidence of 6 week and 6 month persistence

- Bowel cancer does not apply persistence

c) **We also need to estimate the rate at which people recover their health after Behaviour Change , depending on age and intervention**

- Smoking: evidence shows younger people recover full health quickly older people do not fully recover

- Alcohol – recovery is assumed quick since this does not apply to alcoholics

- Obesity health recovery is assumed to vary with age as for smoking

- Breast feeding and Bowel Cancer do not apply health recovery

Long term impact on health

d) Estimates of persistence of behaviour change and health recovery make it possible to estimate the long term health impacts of intervention.

- We need to compare intervention with base case i.e. how many people would change without the intervention

- The Tool then calculates the Life long Impact Multiplier over the remaining life of the clients based on the discounted present value of impacts

- It applies this multiplier to the potential health gain from avoiding the behaviour

d) The potential health gain from avoiding unhealthy behaviour is taken from evidence provided by NICE and WHO

- WHO National Burden of Disease Tool is applied to English data – to show how bad health arises from key behaviour causes.

- The total health burden caused a behaviour divided by the average number of people estimated to indulge in poor health behaviour over the long term gives an estimate of how much health can be improved for each person avoiding the negative health impacts for 1 year

e) You need to input what changes would happen without intervention (base case)

Long term savings for health, care and other service

f) Evidence of the costs savings to the NHS of improving health in each field is taken from studies identified by the NICE Team.

- This is treated in the same way as health impacts to work out saving per person avoiding risk and per QALY

- The Tool then calculates the net present value of future savings over the life of clients

- It is not possible to identify when or where in the health system the cost savings will arise and this ignores the impact of living longer

f) Cost savings to social care, fire and emergency services, street cleaning, and police and criminal justice services are estimated as follows:

- The total cost of these services is taken from relevant national studies.

- The long run marginal cost provides an estimate of how costs vary with behaviour

- This costs is than allocated on the basis of : Years Lived with Disability or number of person years of the behaviour

Impacts on client income and expenditure

g) Savings to clients include less on cigarettes and alcohol, employment income and pension less tax and benefits, reduced informal care, these are estimated as:

- Annual expenditure on cigarettes and alcohol per person gives lifetime savings

- Employment income, pension and benefit estimates from relevant studies

- Informal care costs are based on a study by Care UK adjusted to show care costs at the leisure time rates

h) Savings to employers are estimated as follows:

- Employer cost from absence and lost productivity are from a national study

- Costs are allocated to the reduction in Years Lived with Disability to age 67

- Total impact of the intervention based on % employed and is after tax

i) Impacts on government include:

- Loss of excise and VAT on cigarettes and tobacco, increased income tax, reduced sickness and incapacity benefit payments, increased pension payments and increased corporation tax income plus NHS and LA costs

Impacts on client income and expenditure

j) The value of outcomes to commissioners may reflect :

- The Human Value of a QALY, assumed to be £25,000 in 2007/8 values as agreed by DH economist

- Commissioners may give "Extra value" for improving health for disadvantaged or

- "Extra value" generated by HELP formula or

- Some other way of addressing disadvantage

j) Social Return on Investment can be estimated as:

- Total impact on all stakeholders divided by the cost to all stakeholders or

- Social value of health improvement (QALYs at £25,000 in 2007/8) divided by cost to all stakeholders (without weight for disadvantage)

Taking uncertainty into account

All estimates are uncertain , if we considered the full range of possible values it would give an impossibly wide range of results that would be useless for decision makers, so :

- Health and cost impacts are treated as current consensus best estimates, that can be improved by further studies and evidence

- Behaviour factors such as persistence and health recovery are treated as the main variable to generate a range of reasonable estimates

It is important to be open about the estimates and assumptions used:

- The "User Guides" provide a full description of the basis for each VfM Tool

- A discussion of these assumptions between stakeholders can help build a shared understanding to improve value for all

- It is also important to update the Tools as further evidence and experience emerges

Evaluation results should report a range of possible outcomes

8. Making the Case:
The Evaluation Report

An evaluation report should:
- Clarify the objectives of stakeholders in relation to national and local policy
- Describe the process and mechanisms and , what it means for stakeholders
- Consider alternatives and competition, what would happen without the project?
- Set out costs and benefits, making clear the range of possible outcomes
- Describe risks, uncertainties, unintended consequences, what was learnt?

Measures of VfM will only be useful if the decision makers understand them:
- Cost per QALY
- Cost after NHS Savings per QALY
- Cost after NHS and LA savings per QALY
- Deaths averted
- Years of Life Added and YLD reduced
- Odds Ratio and Number Needed to Treat
- Impacts on Clients, Employers and Govt
- Social impacts with disadvantage weights and HELP Utility Score
- Social Return on Investment

Remember estimates are only as good as the evidence on which they are based

Evaluation requires reasoning and description as well as numbers.

What is good Value for Money in practice?

It depends on how you value different outcomes , how well proven the impacts are and how much uncertainty there is in the evidence:

- NICE limits are 1 QALY per £30,000 (but actually use £20,000 to £70,000) this applies to certain health gains

- Expected but uncertain gains of 1 QALY per £10,000 – £5000 may be reasonable

- Expected but uncertain gains of 1 QALY per £2000 or less is very good

- Interventions that show expected health gain and cost reduction are excellent

There are many other factors to consider:

- Does it meet national/ local priorities?

- What impact will it have on disadvantage?

- Will it create jobs?

- Will the project enhance social capital?

- Is the project appealing in human terms – how does it make people feel?

- What are the risks involved and will the project provide lessons and improve understanding?

Evaluation is not only about cold proven facts it should address all the reasons for and against investment

VfM outcomes from Health England

Category	Type of Intervention	HELP Utility Score	Net cost per QALY
Alcohol	Increase tax by 5%	11.30 %	-£5,267
Smoking	Increase tax by 5%	9.62 %	-£2,951
Smoking	National Media Campaign	9.46 %	-£2,663
Diet, activity, obesity	National Media Campaign	9.09 %	-£3,290
Smoking	Brief Intervention in GP practices	8.98 %	-£1,799
Alcohol	Brief Intervention in GP practices	8.70 %	-£750
Diet, activity, obesity	Brief Intervention in GP practices	8.63 %	-£2,151
Smoking	Nicotine Replacement Therapy	8.25 %	-£563
STI / teen pregnancy	Screening and Treatment	7.38 %	£370
Diet, activity, obesity	School based education	7.25 %	£599
STI / teen pregnancy	School based education condoms	6.00 %	£4,965
Statins	Use for primary prevention	4.26 %	£9,858
Mental health	Assessment + support for carers	0.95 %	£35,264
Mental health	Screening retirees for depression	0.12 %	£70,120

Taken From "Health England Leading Prioritisation: HELP" by Matrix Consulting

Time to try this out as you present your evaluation report

Work in table teams to prepare a business case or review :

- Prepare a 5 minute presentation describing your project in terms of :
  - Its objectives and rationale
  - How it fits national and local priorities
  - What it means for clients
  - How much it costs and who pays
  - What benefits it achieves
  - What range of VfM it achieves
  - What evidence you are relying on
  - Any other supporting evidence

As the decision makers please listen to the presentations and consider:

- **Would you support the investment?**

- **Is the case convincing?**

- **Is the evidence clear?**

- **What questions remain unanswered?**

Reflection and Lessons: Question time

We hope this has helped but of course this is a very complex area so maybe you have some questions?

Do you have the confidence to apply the tools in practice?

If you need further help contact us
Rowena Merritt   R.Merritt@thensmc.com
Graham Lister   g_c-lister@msn.com

Best of Luck