

NICE National Institute for
Health and Care Excellence

NICE Public Health Guidance and return on
investment tools

Kay Nolan (kay.nolan@nice.org.uk)
HTAi 2015 Oslo

Overview

- Public Health guidance production
- “Best Available Evidence”
- Practical tools to support implementation
- Return on Investment tools

Centre for Public Health

- NICE Public Health guidance
 - Apply principles of EBM to PH problems
- Local Government Briefings

NICE

Core principles NICE guidance production

- Best available evidence
- Expert input
- Patient and carer involvement and community engagement
- Independent advisory committees
- Genuine consultation
- Regular review
- Open and transparent process

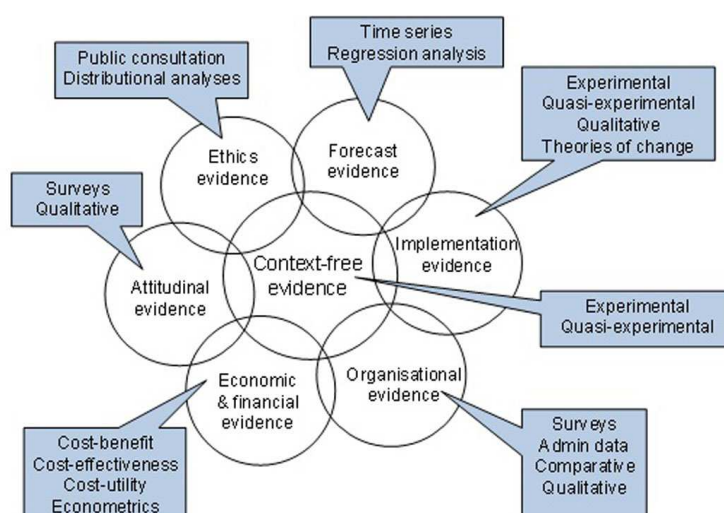
NICE

Best available evidence

- Evidence-based guidance of effective and cost effective approaches to Public Health problems
- Most suitable evidence to answer the question we are addressing
- Evidence drawn from range of disciplines

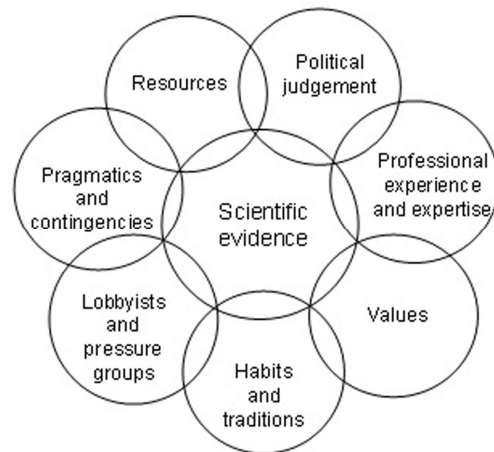
NICE

Scientific evidence



NICE

Colloquial Evidence



NICE

Best available evidence

- Evidence drawn from range of disciplines
- Hierarchy of evidence
 - RCT not always best approach to answer PH questions
 - Experimental conditions do not always represent real 'life'
- Approach to interrogation of the evidence
 - How can the quality of the evidence be assessed
 - How can the evidence from different kinds of research be combined (Quantitative and qualitative)

NICE

Evidence

- Effectiveness
- Epidemiological
- Qualitative (views/experiences)
- Stakeholder comments
- Fieldwork
- Expert testimony
- Correlates
- Map of practice
- Review of reviews
- Cost effectiveness
- *de novo* economic model
- Committee knowledge

NICE

Research Recommendations

- Guidance production identifies gaps in the evidence base
- Guidance details several research questions

NICE

Effective Interventions Library

- Facility available through NICE pathways
- Links recommendations to supporting evidence about effective interventions
- Summary information
 - Effectiveness (e.g. effect size)
 - Cost effectiveness
 - Considerations of the Committee
- Links to evidence reviews, study publications, considerations

NICE

Implementation support

- Support for commissioning
 - Costing tools
 - Commissioning guides
- Service improvement and audit
 - Assessment tools
 - Clinical audit
 - Costing tools
- Education and learning
 - E-learning modules
 - Learning resources
 - Podcasts
 - Shared learning
 - Slide sets

NICE

NICE Quality Standards

- A concise set of statement designed to drive measure priority quality improvement within a particular topic area
- Usually 6-8 statements

NICE

What is the relationship between a guideline and a QS

A comprehensive set of recommendations for a particular disease or condition, particular need or service



A NICE Quality Standard is a **concise set of statements** designed to **drive and measure priority quality improvements** within a particular **topic area**. Around 6-8 statements per standard – up to 15 in exceptional circumstances.

NICE

Antony Morgan & Lesley Owen

RETURN ON INVESTMENT

NICE

July 2011 New Referral to NICE from Ministers

- To develop a **prototype** model for local authority commissioners showing the potential return on investment (ROI) for health improvement interventions.
- Initially the work focused on tobacco control.

NICE

Cost impact project

- Mixed methods employed
 - Workshops and interviews with commissioners and local decision makers
 - Analysis of current approach to Cost Effectiveness and Cost Impact
 - Review of existing ROI methods and tools
 - Testing of ROI methods
 - Reference group established + PHIAC working group

NICE

Key Findings

- Key findings
 - Range of people involved in decision making
 - Multiple data, sources and tools in use
 - Views differed within and across LAs and Health sectors regarding criteria most useful for decision making e.g. health inequalities and cost effectiveness.
 - Different criteria may lead to different decisions
- Report and summary available here:
[http://www.nice.org.uk/ourguidance/otherpublications/costimpactinvestm
entreturn.jsp](http://www.nice.org.uk/ourguidance/otherpublications/costimpactinvestm
entreturn.jsp)

NICE

NICE's approach to Return on Investment

- Report health and non-health outcomes and costs in disaggregated format
- Report a range of economic metrics for short, medium and long term time horizons
- Develop scenario analyses around different intervention options
- Review existing models and costing tools to supplement initial cost impact project

NICE

NICE's ROI tool methods in brief

- Microsoft Excel-based model
- Follows the group of current smokers in the selected areas and predicts their:
 - Mortality, smoking status and associated healthcare use and other events (e.g. absenteeism) over time
 - Estimates ROI by taking into account both the effectiveness and costs of services
- Uses most recent prevalence data from IHS and other input parameters come from a range of rigorously selected sources

NICE

What the NICE ROI model allows the user to do?

- Use local data to count the cost of smoking
 - Public sector costs
 - Wider society
- Use local data to explore “what happens if” scenarios
 - impact of different packages of interventions against a baseline of “do nothing”
 - impact of different packages of interventions against each other
 - impact of adding sub-national strategy
 - Impact of adding GP brief advice

NICE

Example questions the ROI tool can help you to answer

- What is smoking costing in my local area?
- What is the ROI for my current package of services?
- What happens if I increase the number of smokers using the LSSS in my area?
- If I would like to improve a particular service, how does that affect the ‘value for money’ of my package of interventions?
 - Can I save more money?
 - When can I start saving money?
- Can I estimate ROIs of my package of services in the short-term in addition to longer terms?
- Can I use my own best available data to estimate ROI of my services?

NICE

8 Metrics in the model

- Cost per Quality adjusted life year (QALY)
- Net present value (NPV) -cost savings minus the costs of the intervention
- Benefit-cost ratios
- Gross cost savings
- Cost per quitter
- Cost per life year gained
- Cost per death avoided
- Avoided burden of disease (i.e. QALYs gained per 1000 population)

NICE

Interventions in the ROI Model

- 12 X NHS Stop Smoking Services (SSI) interventions
- OTC NRT
- Px NRT (mono & combo)
- Px Varenicline
- Px Bupropion
- Self help materials
- Brief opportunistic advice by GPs
- One-to-one pharmacy interventions
- Text-to-stop
- Internet support
- Proactive telephone support

NICE

NICE Tobacco Return on Investment tool

- Information about the tool – assumptions/parameterisation
- Access to the tool
- Interactive support tool
- User Guide
- Technical report
- Available at <http://www.nice.org.uk/usingguidance/implementationtools/returnoninvestment/TobaccoROITool.jsp>

NICE

The screenshot displays the 'Results Menu' of the NICE Tobacco Return on Investment tool. The interface includes a navigation bar with 'Introduction', 'Results', and 'Disclaimer' tabs. The main content area is titled 'Welcome to the Results Menu' and provides instructions on how to access results, including links for 'Baseline, Package A and Package A+'. It also lists time horizons (1 year, 2 years, 5 years, 10 years, and Lifetime) and offers options to view specific analyses or generate reports. A 'Definitions' section explains that results include short-term annual costs and savings associated with the NHS, social care, and passive smoking. Below this, there are sections for 'Breakdown of Costs' and 'Breakdown of Analyses', each containing several interactive buttons. At the bottom, there are three large buttons: 'Return to Parameter Inputs', 'Generate Report', and 'Export All Data'. A small copyright notice is visible at the bottom of the interface.

Welcome to the Results Menu

You can access the results of your analysis here. Results are divided by type and are presented for: [Baseline](#), [Package A](#) and [Package A+](#).

And at the following time horizons: 1 year, 2 years, 5 years, 10 years and [Lifetime](#).

You can view the results of specific analyses by clicking the buttons below. A [summary report](#) can be generated or the [data tables and graphs](#) can be extracted to Excel.

Definitions

Results include short-term annual costs and savings associated with the NHS, social care and passive smoking.

Breakdown of Costs

- Overview of the Short-Term Annual Costs
- Overview of the Annual Societal Costs in Years 1 & 2
- Overview of the Annual Counts of NHS Events in Years 1 & 2

Breakdown of Analyses

- Net Present Value (NPV) Analyses
- Avoidable Burden of Disease Analysis
- Benefit-Cost Ratio (CBA) Results
- Incremental Cost Effectiveness Ratio (ICER) Results

Return to Parameter Inputs | **Generate Report** | **Export All Data**

© Copyright National Institute for Health and Clinical Excellence, 2006 (updated 2009). All rights reserved. This material may be freely downloaded and stored for non-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of the Institute.

NICE

Allocate smokers to tobacco control interventions (advanced)

Introduction | Uptake | Costs | Disclaimer

Area: Cheshire East Smokers: 45,243 Ex-Smokers: 97,034

NHS Stop Smoking Service Interventions

Select a type of support	Effectiveness of smokers	Number	% of all smokers
Group Support	<input checked="" type="checkbox"/>	0	0.00%
One-to-One Support	<input checked="" type="checkbox"/>	0	0.00%
Drop-In Support	<input checked="" type="checkbox"/>	0	0.00%
Remaining NHS SSS interventions not listed above	<input checked="" type="checkbox"/>	1,025	2.26%

11.03% of your smoking population has been allocated to receive NHS SSS interventions

Other Interventions

Select a type of intervention	Effectiveness of smokers	Number	% of all smokers
Pharmacotherapy	<input checked="" type="checkbox"/>	0	0.00%
Support and Advice	<input checked="" type="checkbox"/>	0	0.00%
	<input checked="" type="checkbox"/>	0	0.00%
	<input checked="" type="checkbox"/>	0	0.00%

32.91% of your smoking population has been allocated to receive other interventions

Total proportion of smokers allocated to interventions: 54.11%

Click to reset all allocations to default:

© Copyright National Institute for Health and Clinical Excellence, 2006 (updated 2009). All rights reserved. This material may be freely downloaded and stored for not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of the Institute.

NICE

Overview of the Annual Counts of NHS Events in Years 1 & 2

	Annual counts in first 2 years	
Baseline - no interventions		
GP consultation counts	48,969	
Practice nurse consultation counts	13,731	
Outpatient visit counts	9,397	
Admission counts	2,099	
Prescriptions	27,228	
Smoking attributable cases in adult passive smokers	1,449	
Smoking attributable cases in child passive smokers	5,591	
Package A - individual interventions only (2% background quit rate)		
		Package A reductions
GP consultation counts	47,926	1,043
Practice nurse consultation counts	13,439	292
Outpatient visit counts	9,197	200
Admission counts	2,054	45
Prescriptions	26,649	579
Smoking attributable cases in adult passive smokers	1,418	31
Smoking attributable cases in child passive smokers	5,472	119
programme (5% background quit rate)		
		Package A+ reductions
GP consultation counts	47,115	1,854
Practice nurse consultation counts	13,212	520
Outpatient visit counts	9,041	356
Admission counts	2,019	79
Prescriptions	26,197	1,030
Smoking attributable cases in adult passive smokers	1,394	55
Smoking attributable cases in child passive smokers	5,379	212

NICE

Work in progress

- 3 new models have been finalised
 - Extended work on tobacco ROI Model
 - 2 new ROI models for physical activity and alcohol
- Working with PHE other stakeholders to disseminate models
- Available NICE website Spring 2014