Description of the economic model (EQUIPTMOD) to assess the impact of tobacco cessation in five European countries

EQUIPT ROI Tool Technical Manual and Annexes

The EQUIPT Study Group

October 2016

EQUIPTMOD Technical Manual Appendix – the NETHERLANDS

This is a technical appendix to the main report describing the EQUIPT ROI Tool available from:
http://equipt.eu/deliverables

European-study on Quantifying Utility of Investment in Protection from Tobacco www.equipt.eu

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement No. 602270(EQUIPT)

EQUIPTMOD Technical Manual

Appendix – the NETHERLANDS

This is a technical appendix to the main report describing the EQUIPT ROI Tool available from:
http://equipt.eu/deliverables

Country	**The Netherlands**
Person responsible to complete this report	**Kei Long Cheung**
Version	**1.1**
Date	**October 2016**
Verified by:	**Mickael Hiligsmann**

For **each parameter**, the following information is provided:

1. Name of the parameter	**State the name and provide following info:**
1.1. Source	List the full reference of the study. If the source is unpublished or the value comes from your own analysis, you must indicate so here
1.2 Parameter value(s)	Indicate the base value in bold and provide all other values suggested for sensitivity analyses
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Describe characteristics of the population and/or sub-groups from which the above value was obtained
2.2 Setting and location	Where was the study from which you have obtained the above value conducted? What were characteristics of (healthcare) system in that setting? If it is not possible to find this information in the source material, state 'not found'
2.3 Perspective	State whether the source study had any perspective, e.g. healthcare, societal, etc. If not applicable, state 'NA'
2.4 Interventions and comparators	Is the above parameter is related to an intervention and comparator, describe those as in the source material. If not applicable, state 'NA'.
2.5 Time horizon	State the time horizon related to the above parameter in the source material. If not applicable, state 'NA'.
2.6 Discount rate	State discount rate as applied in the source material. If not applicable, state 'NA'.
2.7 Choice of outcome	State how the source material chose (health or other relevant) outcomes to derive the above value? If not applicable, state 'NA'.
2.8 Measuring outcome	How was the outcome measured in the source material? Was it based on a single outcome or synthetic estimate? Was the outcome measured using preference-based method? If yes to one or more, provide details. If not applicable, state 'NA'.
2.9 Year	In which year the source study was conducted? Was the parameter value reflect the same year or different year (specify)?

2.10 Conversion	Was any conversion involved in deriving the above value? If yes, describe method of conversion. If no, state, 'NA'.
2.11 (Statistical) model	Was the above value calculated using any (statistical) model? If yes, describe method of analysis. Include the following: • How was the skewed, missing or censored data handled in the source material? • How was extrapolation done (if any)? • What statistical technique (e.g. ANOVA, OLS, Logistic regression, etc.) was used? • How was the uncertainty measured, e.g. via 95% confidence interval? If no, describe the non-model based calculation method.
3. Assumptions	**List all assumptions underpinning the above value, as described in the source materials.**
4. Limitations	**List all important limitations of source materials**
5. Transferability	**Is there anything from the source material that may have implications in relation to applying/generalizing the value to EQUIPT countries?**
6. Conflict of interest	**Look at the Conflict of Interest section in the source material and identify if there is anything that we should be aware of in using the above parameter value in the EQUIPT project (e.g. the value comes from pharma-sponsored study).**

Index

Abbreviations

CBS – Central Bureau Statistics

CHD – Coronary Heart Disease

COPD – Chronic Obstructive Pulmonary Disease

GP – General Practitioner

HICP – Harmonised indices of consumer prices

ICD – International Classification of Diseases

LC – Lung Cancer

LRI - low respiratory infections

NRT – Nicotine replacement therapy

NS – Nonsmoker

OTC – Over the counter

Rx – prescription

S – Smoker

1. General data

1.1. Regional population details

1. Name of the parameter	**Dutch population by age and sex 2015**
1.1. Source	CBS statline http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=7461bev&D1=0&D2=a&D3=a&D4=l&HD=141009
1.2 Parameter value(s)	In the appendix, see table 1, sheet population figures in the Excel
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2015
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

1.2. Mortality rates

1. Name of the parameter	**Dutch actuary life tables in 2014**
1.1. Source	CBS http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=37360ned&D1=0&D2=a&D3=a&D4=l&HD=150924-1258&HDR=G1,T&STB=G2,G3 Levensverwachting; geslacht en leeftijd 2014
1.2 Parameter value(s)	In the appendix, see table 2
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2014
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	-
4. Limitations	-
5. Transferability	**Local data**
6. Conflict of interest	-

1.3. Smoking Prevalence

1. Name of the parameter	**Dutch prevalence of smoking for men and women**
1.1. Source	Continue Rook onderzoek 2013 Gained from Trimbos-instituut, January 2016
1.2 Parameter value(s)	In the appendix, see table 3.1
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	-
4. Limitations	-
5. Transferability	**Local data**
6. Conflict of interest	-

1. Name of the parameter	**Dutch percentage of heavy smokers (more than 10 cigarettes)**
1.1. Source	Continue Rook onderzoek 2013 Gained from Trimbos-instituut, January 2016
1.2 Parameter value(s)	In the appendix, see table 3.2
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013
2.10 Conversion	NA

2.11 (Statistical) model	NA
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

1.4. Relative Risks

1. Name of the parameter	**Relative risk of lung cancer**
1.1. Source	Surgeon General's report 2014 for those under 54 and from Thun et all NEJM 2013 for those over 54
1.2 Parameter value(s)	In the appendix, see table 4
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013-2014
2.10 Conversion	NA
2.11 (Statistical) model	Country-specific relative risks are not available. In EQUIPT, this data was used if countries did not have country-specific data.
3. Assumptions	**NA**
4. Limitations	NA
5. Transferability	**Transferability of international data is assumed**
6. Conflict of interest	**-**

1. Name of the parameter	**Relative risk of CHD**
1.1. Source	Surgeon General's report 2014 for those under 54 and from Thun et all NEJM 2013 for those over 54
1.2 Parameter value(s)	In the appendix, see table 4
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013-2014
2.10 Conversion	NA
2.11 (Statistical) model	Country-specific relative risks are not available. In EQUIPT, this data was used if countries did not have country-specific data.
3. Assumptions	**NA**
4. Limitations	NA
5. Transferability	**Transferability of international data is assumed**
6. Conflict of interest	**-**

1. Name of the parameter	**Relative risk of COPD**
1.1. Source	Surgeon General's report 2014 for those under 54 and from Thun et all NEJM 2013 for those over 54
1.2 Parameter value(s)	In the appendix, see table 4
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013-2014
2.10 Conversion	NA
2.11 (Statistical) model	Country-specific relative risks are not available. In EQUIPT, this data was used if countries did not have country-specific data.
3. Assumptions	**NA**
4. Limitations	NA
5. Transferability	**Transferability of international data is assumed**
6. Conflict of interest	**-**

1. Name of the parameter	**Relative risk of stroke**
1.1. Source	Surgeon General's report 2014 for those under 54 and from Thun et all NEJM 2013 for those over 54
1.2 Parameter value(s)	In the appendix, see table 4
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2013-2014
2.10 Conversion	NA
2.11 (Statistical) model	Country-specific relative risks are not available. In EQUIPT, this data was used if countries did not have country-specific data.
3. Assumptions	**NA**
4. Limitations	NA
5. Transferability	**Transferability of international data is assumed**
6. Conflict of interest	**-**

1.5. Discount rate for costs and utilities

1. Name of the parameter	**discount rate for utilities**
1.1. Source	Handleiding voor kostenonderzoek (Hakkaart-van Roijenm Tan, & Bouwmans, 2010) http://www.zorginstituutnederland.nl/binaries/content/documents/zinl-www/documenten/publicaties/overige-publicaties/1007-handleiding-voor-kostenonderzoek/1007-handleiding-voor-kostenonderzoek/Handleiding+voor+kostenonderzoek.pdf
1.2 Parameter value(s)	**0.015** (0.03-0.05)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	NA
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2010
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**The Dutch guideline recommends to discount costs with 4% and effects with 1.5%. For comparability with other countries, a discount rate of 3% or 5% may be used.**
4. Limitations	**-**
5. Transferability	**Based on Dutch guidelines, limiting the transferability**
6. Conflict of interest	**-**

1. Name of the parameter	**discount rate for costs**
1.1. Source	Handleiding voor kostenonderzoek (Hakkaart-van Roijenm Tan, & Bouwmans, 2010) http://www.zorginstituutnederland.nl/binaries/content/documents/zinl-

	www/documenten/publicaties/overige-publicaties/1007-handleiding-voor-kostenonderzoek/1007-handleiding-voor-kostenonderzoek/Handleiding+voor+kostenonderzoek.pdf
1.2 Parameter value(s)	**0.04** (0.03-0.05)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	NA
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2010
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**The Dutch guideline recommends to discount costs with 4% and effects with 1.5%. For comparability with other countries, a discount rate of 3% or 5% may be used.**
4. Limitations	**-**
5. Transferability	**The guideline also recommends to conduct the sensitivity analysis with 4% discount rate for both effects and costs for an uniform discount scenario**
6. Conflict of interest	**-**

1.6. Threshold value for QALY

1. Name of the parameter	**Threshold value for QALY**
1.1. Source	RVZ, 2006 http://rvz.net/uploads/docs/Advies_-_Zinnige_en_duurzame_zorg.pdf
1.2 Parameter value(s)	**€ 25,000.00** (10000-80000)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	NA
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2006
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**In the Netherlands a threshold is taken between 10000 and 80000, which is different for different diseases. An internal discussion led to a threshold of €25,000.00 which may be most appropriate in the context of the ROI tool.**
4. Limitations	**-**
5. Transferability	**Based on Dutch guidelines, limiting transferability**
6. Conflict of interest	**-**

1.7. Inflation rates

1. Name of the parameter	**Consumer Price Index / Cost of Goods Relative to Base Year**
1.1. Source	Consumer prices; European harmonised price index 2005 = 100 (HICP) Hyperlink to table: http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLEN&PA=80087ENG&D1=0&D2=0&D3=12,25,38,51,64,77,90,103,116,129,142,155&HD=141010
1.2 Parameter value(s)	In the appendix, see table 8
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	The harmonised consumer price index (HICP), calculated by Statistics Netherlands, measures the average price changes of goods and services purchased by households. As the harmonised consumer price index is compiled in a similar way in all member states, it makes it possible to compare price developments within the EU properly.
2.2 Setting and location	As the harmonised consumer price index is compiled in a similar way in all member states, it makes it possible to compare price developments within the EU properly. However, the index does not accurately reflect the national inflation rate. The main difference between the harmonised consumer price index and the national consumer price index is the composition of the 'shopping baskets'. For instance, the national consumer price index includes imputed rental value, consumption-related taxes (real estate tax, motor vehicle tax, etc.), expenditure abroad, membership and tuition fees, whereas the harmonised consumer index does not. For a description of the survey see: Harmonised consumer price index http://www.cbs.nl/en-GB/menu/themas/prijzen/methoden/dataverzameling/korte-onderzoeksbeschrijvingen/2010-onderzoek-harmonidescpi.htm In January 2012 Statistics Netherlands introduced new methods in the HICP for the observation of prices for '07330 Passenger transport by air'

	and for '09600 package holidays'. You can find a comprehensive description of these methods and the impact on the HICP in the report: THE INTRODUCTION OF NEW METHODS FOR PRICE OBSERVATIONS IN THE CONSUMER PRICE INDEX (CPI) http://www.cbs.nl/NR/exeres/518C10D0-4F69-4868-BFBA-677FAF86313E.htm.
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	In which year the source study was conducted? Data available from: January 2002
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

2. Disease Prevalence

2.1. Lung cancer prevalence

1. Name of the parameter	**Prevalence of Lung Cancer by age and sex**
1.1. Source	RIVM Nationaal Kompas Volksgezondheid, Integraal Kankercentrum Nederland, CBS 10-years prevalence of lung cancer to age and gender on january 1 2011. RIVM Nationaal Kompas Volksgezondheid, Integraal Kankercentrum Nederland http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/kanker/longkanker/ IKNL estimates differ from Nationaal Kompas, perhaps due to including bronchus cancer (http://www.cijfersoverkanker.nl/p=543e8fdc2e35a) Total Dutch population (2011) CBS http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=71090NED&D1=0&D2=a&D3=101-102,104-105,108-109,111-112,114-115,117-118,120,123,125-126,128-129,132-
1.2 Parameter value(s)	In the appendix, see table 9 Age Male Female 0-14 0.00% 0.00% 15-29 0.00% 0.00% 30-44 0.01% 0.01% 45-59 0.10% 0.13% 60-74 0.50% 0.32% 75+ 0.89% 0.24%
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2011
2.10 Conversion	NA

2.11 (Statistical) model	Prevalence of lung cancer by age and sex by dividing absolute prevalance with the total population. The age groups differed from age groups in total population so we needed to sum age groups from the total population in order to align the absolute prevalence estimates of lung cancer
3. Assumptions	Prevalence of lung cancer by age and sex by dividing absolute prevalance with the total population. The age groups differed from age groups in total population so we needed to sum age groups from the total population in order to align the absolute prevalence estimates of lung cancer
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

2.2. Coronary Heart Disease (CHD) prevalence

1. Name of the parameter	**Prevalence of CHD by age and sex**
1.1. Source	Point prevalence of CHD to age and gender on january 1 2011. RIVM Nationaal Kompas Volksgezondheid Based on LINH, LMR en CBS-Doodsoorzakenstatistiek http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/hartvaatstelsel/coronaire-hartziekten/omvang/ Total Dutch population (2011) CBS http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=71090NED&D1=0&D2=a&D3=101-102,104-105,108-109,111-112,114-115,117-118,120,123,125-126,128-129,132-
1.2 Parameter value(s)	In the appendix, see table 10
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2011
2.10 Conversion	NA
2.11 (Statistical) model	Prevalence of CHD by age and sex by dividing absolute prevalance with the total population
3. Assumptions	**Prevalence of CHD by age and sex by dividing absolute prevalance with the total population**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

2.3. Chronic Obstructive Pulmonary Disease (COPD) prevalence

1. Name of the parameter	**Prevalence of COPD by age and sex**
1.1. Source	RIVM, Nationaal Kompas Volksgezondheid. Based on data from 5 GP registrations http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/ademhalingswegen/copd/cijfers-copd-prevalentie-incidentie-en-sterfte-uit-de-vtv-2010 Data from 5 GP registrations estimates of prevalence in 2007 are based on GP registration 1. CMR-Nijmegen 2. LINH 3. RNH 4. RNUH-LEO 5. Transitieproject Total Dutch population (2007) CBS http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=71090NED&D1=0&D2=a&D3=101-102,104-105,108-109,111-112,114-115,117-118,120,123,125-126,128-129,132-133&D4=0&D5=0&D6=12&HD=141010-2122&HDR=T,G3,G1&STB=G2,G4,G5 CBS data from 1 january 2007
1.2 Parameter value(s)	In the appendix, see table 11
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2007
2.10 Conversion	NA
2.11 (Statistical) model	Prevalence of COPD by age and sex by dividing absolute prevalance with the total population
3. Assumptions	Prevalence of COPD by age and sex by dividing absolute prevalance with the total population
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

2.4. Stroke prevalence

1. Name of the parameter	**Prevalence of stroke by age and sex**
1.1. Source	RIVM Nationaal Kompas Volksgezondheid Based on LINH, LMR en CBS-Doodsoorzakenstatistiek http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/hartvaatstelsel/beroerte/omvang/#definition_491 Total Dutch population (2011) CBS http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=71090NED&D1=0&D2=a&D3=101-102,104-105,108-109,111-112,114-115,117-118,120,123,125-126,128-129,132-
1.2 Parameter value(s)	In the appendix, see table 12
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2011
2.10 Conversion	NA
2.11 (Statistical) model	Prevalence of stroke by age and sex by dividing absolute prevalence with the total population
3. Assumptions	**Prevalence of stroke by age and sex by dividing absolute prevalence with the total population**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

3. Disease Costs

3.1. Lung cancer costs

1. Name of the parameter	**Annual cost of lung cancer**
1.1. Source	RIVM Kosten van Ziekten database, Nationaal Kompas Volksgezondheid, IKNL
1.2 Parameter value(s)	€ 19,566 (€2011)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	10-years prevalence of lung cancer to age and gender on january 1 2011.
2.2 Setting and location	The Netherlands 10-years prevalence of lung cancer to age and gender on january 1 2011. RIVM Nationaal Kompas Volksgezondheid, Integraal Kankercentrum Nederland http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/kanker/longkanker/ IKNL estimates differ from Nationaal Kompas, perhaps due to including bronchus cancer (http://www.cijfersoverkanker.nl/p=543e8fdc2e35a) € 401 000 000 / 20510
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA.
2.8 Measuring outcome	NA
2.9 Year	2011, same year
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**The assumption that 10-years prevalence of lung cancer of 2011 represents the lung cancer population of 2011 from which the costs were derived.**

4. Limitations	Calculated by dividing the total costs of lung cancer in 2011 by the 10-years prevalence of lung cancer in 2011.
5. Transferability	**Local data**
6. Conflict of interest	**-**

3.2. Coronary Heart Disease (CHD) costs

1. Name of the parameter	**Annual cost of coronary heart disease**
1.1. Source	RIVM Kosten van Ziekten database, Nationaal Kompas Volksgezondheid, Based on LINH, LMR en CBS-Doodsoorzakenstatistiek
1.2 Parameter value(s)	€ 3,443 (€2011)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Point prevalence of CHD to age and gender on january 1 2011.
2.2 Setting and location	The Netherlands Point prevalence of CHD to age and gender on january 1 2011. RIVM Nationaal Kompas Volksgezondheid Based on LINH, LMR en CBS-Doodsoorzakenstatistiek http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/hartvaatstelsel/coronaire-hartziekten/omvang/ € 2 081 400 000 / 604475
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA.
2.8 Measuring outcome	NA
2.9 Year	2011, same year
2.10 Conversion	Calculated by dividing the total costs of lung cancer in 2011 by the prevalence of CHD.
2.11 (Statistical) model	NA
3. Assumptions	**The assumption that Point prevalence of CHD of 2011 represents the CHD population of 2011 from which the costs were derived.**
4. Limitations	Calculated by dividing the total costs of CHD in 2011 by the point-prevalence of CHD in 2011.
5. Transferability	**Local data**
6. Conflict of interest	**-**

3.3. Chronic Obstructive Pulmonary Disease (COPD) costs

1. Name of the parameter	**Annual cost of COPD**
1.1. Source	Suijkerbuijk AWM, Hoogeveen RT, Wit GA de, Wijga AH, Hoogendoorn EJI, Rutten-van Molken MPMH, et al. - Maatschappelijke kosten voor astma, COPD en respiratoire allergie. Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu, 2013. – http://www.rivm.nl/bibliotheek/rapporten/260544001.pdf
1.2 Parameter value(s)	€ 1,356 (€2007)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Care expenditure per COPD patient (all ages)
2.2 Setting and location	The Netherlands
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA.
2.8 Measuring outcome	NA
2.9 Year	2007, same year
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**-**
4. Limitations	Data from 2007
5. Transferability	**Local data**
6. Conflict of interest	**-**

3.4. Stroke costs

1. Name of the parameter	**Annual cost of stroke**
1.1. Source	RIVM Kosten van Ziekten database, RIVM, Nationaal Kompas Volksgezondheid. Based on LINH, LMR en CBS-Doodsoorzakenstatistiek, CBS statline
1.2 Parameter value(s)	€ 12,955 (€2011)
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Point prevalence of stroke to age and gender on january 1 2011.
2.2 Setting and location	The Netherlands Point prevalence of stroke to age and gender on january 1 2011. RIVM Nationaal Kompas Volksgezondheid Based on LINH, LMR en CBS-Doodsoorzakenstatistiek http://www.nationaalkompas.nl/gezondheid-en-ziekte/ziekten-en-aandoeningen/hartvaatstelsel/beroerte/omvang/#definition_491 € 2259 200 000 / 174382
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA.
2.8 Measuring outcome	NA
2.9 Year	2011, same year
2.10 Conversion	Calculated by dividing the total costs of stroke in 2011 by the prevalence of stroke.
2.11 (Statistical) model	NA
3. Assumptions	**The assumption that Point prevalence of stroke of 2011 represents the stroke population of 2011 from which the costs were derived.**
4. Limitations	Calculated by dividing the total costs of stroke in 2011 by the point-prevalence of stroke in 2011.
5. Transferability	**Local data**
6. Conflict of interest	**-**

4. Pharmacotherapy Intervention Costs

4.1. Brief physician advice

1. Name of the parameter	**Cost of brief physician advice**
1.1. Source	Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	33 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.2. Rx Single form NRT

1. Name of the parameter	**Cost of Rx Single form NRT**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	225.049 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	Typically enough to deliver >1mg nicotine per hour systematically. Hence, I calculated the costs for each form for at least 24 mg per day. Starting on the target quit date and continuing for 8 weeks, means we need to multiply with 7 (days) and 8 (weeks). Based on UK data* we either assumed a weight of 80% for patches, 5% for gum and 15% total for everything else in deriving the average. Average for gum = 3 euro Average for patches = 3 euro Average for everything else = 30.892 / 6 = 5.14867 Weighted average = 0.8*3+0.05*3+0.15*5.14867= 3.3223 euro per day Meaning average of 3.3223*7*8=186.049 euro in total Adding the GP consult (+33) and adding drug acquisition costs: (+6) = 225.049 Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 NICOTINE TABLET VOOR SUBLINGUAAL GEBRUIK 2MG 0.28 0.284/2*24=3.36 NICOTINE ZUIGTABLET 1MG 0.35 0.35*24=8.40 NICOTINE ZUIGTABLET 1,5MG 0.44

	0.44/1.5*24=7.04 NICOTINE ZUIGTABLET 2MG 0.35 - 0.43 0.43/2*24=5.16 NICOTINE ZUIGTABLET 4MG 0.44 0.44/4*24=2.62 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 7MG/24UUR 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 14MG/24UUR 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 114MG 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 21MG/24UUR 3 NICOTINE KAUWGOM 2MG 0.18-0.33 0.34/2*24=3.96 NICOTINE KAUWGOM 4MG 0.21-0.34 0.34/4*24=2.04 NICOTINE SPRAY VOOR OROMUCOSAAL GEBRUIK 1MG/DO FL 150DO 26.95 26.95/150*24=4.312 euro per day
3. Assumptions	**It is an interval to provide NRT ranging from the cheapest to the most expensive approach**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.3. Rx Combo NRT

1. Name of the parameter	**Cost of Rx Combo NRT**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	225.05 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	Typically enough to deliver >1mg nicotine per hour systematically Hence, we calculated the costs for each form for at least 24 mg per day. This provides an interval between 2.04 and 8.40 euro per day. Based on UK data* we either assumed a weight of 80% for patches and 20% for everything else in deriving the average for each dual form. We assumed 80% use of patch + 20% use of another form. Then average the costs of the forms. See cost for each form below: 0.8*3*7*8+0.2*7*8*3.36=172.03 0.8*3*7*8+0.2*7*8*8.40=228.48 0.8*3*7*8+0.2*7*8*7.04=213.25 0.8*3*7*8+0.2*7*8*5.16=192.19 0.8*3*7*8+0.2*7*8*2.62=163.74 0.8*3*7*8+0.2*7*8*3.96=178.75 0.8*3*7*8+0.2*7*8*2.04=157.25 0.8*3*7*8+0.2*7*8*4.312=182.69

	Averaged = (172.03+228.48+213.25+192.19+163.74+178.75+157.25+182.69)/8=186.05 Adding the GP consult (+33) and adding drug acquisition costs: (+6) = <u>225.05</u> Pharmacotherapeutic compass - medicijnkosten.nl; year assessed: 2015 NICOTINE TABLET VOOR SUBLINGUAAL GEBRUIK 2MG 0.28 0.284/2*24=3.36 NICOTINE ZUIGTABLET 1MG 0.35 0.35*24=8.40 NICOTINE ZUIGTABLET 1,5MG 0.44 0.44/1.5*24=7.04 NICOTINE ZUIGTABLET 2MG 0.35 - 0.43 0.43/2*24=5.16 NICOTINE ZUIGTABLET 4MG 0.44 0.44/4*24=2.62 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 7MG/24UUR 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 14MG/24UUR 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 114MG 3 NICOTINE PLEISTER VOOR TRANSDERMAAL GEBRUIK 21MG/24UUR 3 NICOTINE KAUWGOM 2MG 0.18-0.33 0.34/2*24=3.96 NICOTINE KAUWGOM 4MG 0.21-0.34 0.34/4*24=2.04 NICOTINE SPRAY VOOR OROMUCOSAAL GEBRUIK 1MG/DO FL 150DO 26.95 26.95/150*24=4.312 euro per day
3. Assumptions	We assumed 80% use of patch + 20% use of another form. Then average the costs of the forms.
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.4. Varenicline (standard duration)

1. Name of the parameter	**Cost of Varenicline (standard duration)**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	325.71 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	14*(0.5mg)+11*14*(1mg)=23.89+262.82=286.71 Adding the GP consult (+33) Adding drug acquisition costs: (+6) provides 320.70
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.5. Varenicline (extended duration)

1. Name of the parameter	**Cost of Varenicline (extended duration)**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	612.42 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	14*(0.5mg)+23*14*(1mg)=23.89+549.53= 573.42 Adding the GP consult (+33) Adding drug acquisition costs: (+6) provides 612.42
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.6. Bupropion

1. Name of the parameter	**Cost of Bupropion**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	175.78 (157.42-194.14) (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	(150mg)*6 + (150mg)*2*7*6=90*(150mg)=118.42 euro Bupropion (6 weeks) 1.32*6 + 1.32*2*7*8=155.14 euro Bupropion (8 weeks) Adding the GP consult (+33) Adding drug acquisition costs: (+6) provides 157.42-194.14; average = 175.78
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.7. Cost of Nortriptyline

1. Name of the parameter	**Cost of Nortriptyline**
1.1. Source	Pharmacotherapeutic compass - medicijnkosten.nl ; year assessed: 2015 Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	85.835 (75.60 – 96.07) (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	25mg en 50mg available, 75mg - 100mg per day for 12 to 14 weeks 12 weeks (50mg)*7*12+(25mg)*7*12=24.46+12.23=36.69 or (50mg)*2*7*12=36.69 14 weeks (50mg)*7*14+(25mg)*7*14=28.53+14.27=42.80 or (50mg)*2*7*14=57.07 Adding the 33 euro of the GP consult, Adding drug acquisition costs: (+6) provides 75.60 – 96.07 euro; with average of 85.835
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

4.8. Cytisine

1. Name of the parameter	**Cost of Cytisine**
1.1. Source	-
1.2 Parameter value(s)	-
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	-
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	**Not used for Netherlands**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

4.9. OTC Mono NRT

1. Name of the parameter	**Cost of OTC Mono NRT**
1.1. Source	-
1.2 Parameter value(s)	-
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	-
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	**Not relevant for Netherlands**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

4.10. Cost of Cut down to quit

1. Name of the parameter	**Cost of Cut down to quit**
1.1. Source	
1.2 Parameter value(s)	
2. How was the value obtained?	
2.1 Target population/sub-group	
2.2 Setting and location	
2.3 Perspective	
2.4 Interventions and comparators	
2.5 Time horizon	
2.6 Discount rate	
2.7 Choice of outcome	
2.8 Measuring outcome	
2.9 Year	
2.10 Conversion	
2.11 (Statistical) model	
3. Assumptions	**Not relevant for the Netherlands**
4. Limitations	
5. Transferability	
6. Conflict of interest	

5. Behavioural Support Interventions

5.1. Specialist behavioral support: one-to-one

1. Name of the parameter	**Cost of Specialist behavioral support: one-to-one**
1.1. Source	Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	465 euro (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	In the Netherlands, personal coaching intervention consists of minimal 4 face-to-face contacts with a health professional like a GP. GP consult for 10 minutes = 33 euro. This means 3.3 euro per minute. Hence, we reduced the number of meetings to 4. Minutes per meetings were based on the intervention description: Typically weekly sessions, 1h for first session then approx. 30 min on average after that 60*price+3*30*price 60*2.8+3*30*3.3= 465 euro per smoker
3. Assumptions	**Health professional is the GP, costs estimated per minute of a standard consult of 10 minutes (as detailed in the 2010 guideline; Handleiding voor kostenonderzoek (Hakkaart-van Roijenm Tan, & Bouwmans, 2010))**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

5.2. Specialist behavioral support: group-based

1. Name of the parameter	**Cost of Specialist behavioral support: group-based**
1.1. Source	Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	41.905 (29.15 – 54.66) (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	Following a popular Dutch group-based intervention Pak je Kans, there are 9 meetings of 90 minutes, led by a (lung) nurse https://www.twb.nl/voeding-en-dieet/cursussen/stoppen-met-roken-cursus-pak-je-kans Cost nurse = 32,39 per 60 minutes. This means 0.53983 euro per minute. 9*90*(euro per minute) yields: €437.26 There are 8 to 15 individuals per group. http://www.bvhznk.nl/index.php?action=article.show&article=541 Taking a conservative approach, this means 54.66 euro per smoker Using 15 individuals per group yields: 29.15 euro per smoker This provides an average of: 41.905
3. Assumptions	**Description based on Pak je kans;** a popular Dutch group-based intervention. There are 9 meetings of 90 minutes, led by a (lung) nurse https://www.twb.nl/voeding-en-dieet/cursussen/stoppen-met-roken-

	cursus-pak-je-kans
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

5.3. Telephone support: pro-active

1. Name of the parameter	**Cost of Telephone support: pro-active**
1.1. Source	Hakkaart-van Roijen L, Van der Linden N, Bouwmans CAM, Kanters TA, Tan SS. Kostenhandleiding. Methodologie van kostenonderzoek en referentieprijzen voor economische evaluaties in de gezondheidszorg. Zorginstituut Nederland. Geactualiseerde versie 2015.
1.2 Parameter value(s)	119 (€2015)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	Healthcare perspective
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2015
2.10 Conversion	-
2.11 (Statistical) model	We used the costs of a telephone contact with a GP from the Dutch costs manual: Telefonisch contact/ herhaalrecept 17 (kostenprijs onderzoek handleiding) We used telephone contact with GP (without stating minutes), which is 17 euro for each contact. 7 telephone consults, 7*17=119 euro.
3. Assumptions	**Costs estimated from a telephone contact with a GP, as the coach. Calculation was based on 7 telephone consults as described by Kwaliteitregisterstopmetroken.nl http://www.kwaliteitsregisterstopmetroken.nl/geaccrediteerde-activiteiten/interventies/**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

5.4. SMS text messaging

1. Name of the parameter	**Cost of SMS text messaging**
1.1. Source	-
1.2 Parameter value(s)	-
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	-
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

5.5. Printed self-help materials

1. Name of the parameter	**Cost of Printed self-help materials**
1.1. Source	Feenstra et al. (2005), 'Cost-Effectiveness of Face-to-Face Smoking Cessation Interventions: A Dynamic Modeling Study'
1.2 Parameter value(s)	1 (€2003)
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	2003
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	Consistent with Feenstra et al. (2005), 'Cost-Effectiveness of Face-to-Face Smoking Cessation Interventions: A Dynamic Modeling Study', refering to an unavailable reference: Van Spiegel P.DBC Stoppen-Met-Roken Interventies (SRI) voor longartsen (in Dutch). Amsterdam: Slotervaart Ziekenhuis, 2003 1 per unit
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

5.6. Indoor-smoking ban

1. Name of the parameter	**Cost of Indoor-smoking ban**
1.1. Source	-
1.2 Parameter value(s)	-
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	-
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

5.7. Cost of Social marketing

1. Name of the parameter	**Cost of Social marketing**
1.1. Source	-
1.2 Parameter value(s)	-
2. How was the value obtained?	
2.1 Target population/sub-group	-
2.2 Setting and location	-
2.3 Perspective	-
2.4 Interventions and comparators	-
2.5 Time horizon	-
2.6 Discount rate	-
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	-
2.10 Conversion	-
2.11 (Statistical) model	-
3. Assumptions	**-**
4. Limitations	**-**
5. Transferability	**-**
6. Conflict of interest	**-**

6. Motivation to Quit

6.1. Smokers who made a quit attempt in the previous 12 months

1. Name of the parameter	**Quit attempt in the previous 12 months**
1.1. Source	Continu Onderzoek Rookgewoonten: https://assets.trimbos.nl/docs/21388531-6303-48f7-9a47-51898fb427df.pdf
1.2 Parameter value(s)	29% of the (former) smokers seriously attempted to quit smoking (i.e. quit for 24 hours or longer).
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Dutch adult smokers (age 15 or older)
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2014
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	Quit attempt defined as a quit for 24 hours or longer
4. Limitations	-
5. Transferability	**Local data**
6. Conflict of interest	-

7. Passive Smoking

7.1. Cost attributable to passive smoking in children

<table>
<tr><td>1. Name of the parameter</td><td>Cost attributable to passive smoking in children</td></tr>
<tr><td>1.1. Source</td><td>Asthma Costs and Prevalence
Source: Suijkerbuijk, RIVM 2013.

Costs direct
Lower Respiratory Infections
Source: http://www.kostenvanziekten.nl/cijfers/

Acute Otitis Media
Costs per episode: Source: Wolleswinkel-van den Bosch, Vaccine 2010
Prevalence: Source: NIVEL 2011, https://www.nhg.org/standaarden/volledig/nhg-standaard-otitis-media-acuta#note-2</td></tr>
<tr><td>1.2 Parameter value(s)</td><td>Costs All Diseases (€2004, 2007, 2011)
<table>
<tr><th></th><th>Disease</th><th>Age</th><th>Cost (Euros)</th><th>Year</th></tr>
<tr><td>Children</td><td>Lower Respiratory Infections</td><td>0-4</td><td>20800000</td><td>2011</td></tr>
<tr><td></td><td>Otitis Media</td><td>0-5</td><td>5893464</td><td>2004</td></tr>
<tr><td></td><td>Asthma</td><td>0-14</td><td>41149000</td><td>2007</td></tr>
</table></td></tr>
<tr><td>2. How was the value obtained?</td><td></td></tr>
<tr><td>2.1 Target population/sub-group</td><td>According to the estimations provided in Oberg 2010, Acute Otitis Media (AOM), Lower respiratory track infections (LRT infections) and asthma, were set as passive smoking related diseases among children. More specifically:
AOM (acute otitis media): Children 0-4 years old
Asthma: Children 0-16 years old
LRI (low respiratory infections): Children 0-4 years old

With all this, total costs and prevalence of these diseases were obtained, once this is done, the Population Attributable Fraction is applied to get the overall cost incurred due to exposure to second hand smoke.</td></tr>
<tr><td>2.2 Setting and location</td><td>Netherlands</td></tr>
<tr><td>2.3 Perspective</td><td>Healthcare perspective</td></tr>
<tr><td>2.4 Interventions and comparators</td><td>NA</td></tr>
<tr><td>2.5 Time horizon</td><td>NA</td></tr>
</table>

2.6 Discount rate	NA
2.7 Choice of outcome	-
2.8 Measuring outcome	-
2.9 Year	Costs Acute Otitis Media 2004, LRT 2011, and asthma 2007
2.10 Conversion	-
2.11 (Statistical) model	Direct costs of asthma and LRI
3. Assumptions	**Asthma Costs and Prevalence** Source: Suijkerbuijk, RIVM 2013. ***validated Feb. 23, 2015***

Age	Total Costs	Year	Prevalence Men	Prevalence Women
0 to 9	€ 26,374,000 These costs are then divided by 2 (children to 4)	2007	48731	27727

Lower Respiratory Infections
Source: http://www.kostenvanziekten.nl/cijfers/

Age	Annual Expenditure (direct)	Year	Notes
0-4	€ 20,800,000	2011	includes pneumonia and influenza

Acute Otitis Media
Source: Wolleswinkel-van den Bosch, Vaccine 2010

Age	Direct Cost per Episode	Total Costs	Year
under 5 years	63.95	332	2004

Source: NIVEL 2011 https://www.nhg.org/standaarden/volledig/nhg-standaard-otitis-media-acuta#note-2

Age	Prevalence (per 1000)	Population	Prevalence

				(absolute)
	0 to 2	155	346268	53672
	2 to 4	71	542054	38486
4. Limitations	-			
5. Transferability	**Local data**			
6. Conflict of interest	-			

Table 5.1

	Disease	**Age**	**Cost (Euros)**	**Year**
Children	**Lower Respiratory Infections**	0-4	20800000	2011
	Otitis Media	0-5	5893464	2004
	Asthma	0-14	41149000	2007

7.2. Cost attributable to passive smoking in adults

1. Name of the parameter	**Cost attributable to passive smoking in adults**
1.1. Source	
1.2 Parameter value(s)	In the appendix, see table 13
2. How was the value obtained?	
2.1 Target population/sub-group	Trough Surgeon General 2014 Report second hand smoking related diseases in adults were considered to be: Lung cancer. CHD and Asthma. Lung cancer and CHD prevalence previously calculated were used to draw the total direct cost of passive smoking in the Netherlands
2.2 Setting and location	Netherlands
2.3 Perspective	?
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA

2.9 Year	
2.10 Conversion	
2.11 (Statistical) model	NA
3. Assumptions	**Lung Cancer Costs and Prevalence** Source: see 'HC Costs NL' for costs and 'Prev LC NL' for prevalence

Cost per Case	Total Costs	Year	Prevalence Men	Prevalence Women	Notes
20862	465838305	2015	12,072 13,332	8,431 8,997	prevalences are from original Dutch data dynamically calculated, but includes all ages

CHD Costs and Prevalence
Source: see 'HC Costs NL' for costs and 'Prev CHD NL' for prevalence

Cost per Case	Total Costs	Year	Prevalence Men	Prevalence Women	Notes
3671	2444596441	2015	385,497 429,497	218,974 236,361	prevalences are from original Dutch data dynamically calculated, but includes all ages

Asthma Costs and Prevalence
Source: Suijkerbuijk, RIVM 2013. ***validated Feb. 23, 2015***

Age	Total Costs	Year	Prevalence Men	Prevalence Women
0 to 9	€ 26,374,000	2007	48731	27727
10 to 19	€ 29,550,000	2007	43813	36880
20 to 29	€ 24,201,000	2007	26314	29998
30 to 39	€ 34,316,000	2007	30126	40771
40 to 49	€ 47,363,000	2007	35097	51538
50 to 59	€ 42,353,000	2007	28721	44603

	60 to 69	€ 30,573,000	2007	19947	31711
	70 to 79	€ 22,405,000	2007	11384	20271
	80+	€ 13,720,000	2007	4248	10063
4. Limitations	-				
5. Transferability	**Local data**				
6. Conflict of interest	-				

8. Effectiveness (quit rates)

8.1. Taxation

1. Name of the parameter	**Effectiveness of taxation increase**
1.1. Source	Jha, P. and R. Peto, Global effects of smoking, of quitting, and of taxing tobacco. N Engl J Med, 2014. 370(1): p. 60-8
1.2 Parameter value(s)	Relative increase in Quit Attempts: 1.2000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	All smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.2. Indoor-smoking ban

1. Name of the parameter	**Effectiveness of indoor-smoking ban**
1.1. Source	"Hackshaw, L., McEwen, A., West, R., & Bauld, L. (2010). Quit attempts in response to smoke-free legislation in England. Tobacco control, 19(2), 160-164.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.100
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	All smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.3. Social marketing

1. Name of the parameter	**Effectiveness of social marketing**
1.1. Source	Sims, M., Salway, R., Langley, T., Lewis, S., McNeill, A., Szatkowski, L., & Gilmore, A. B. (2014). Effectiveness of tobacco control television advertising in changing tobacco use in England: a population-based cross-sectional study. Addiction, 109(6), 986-994.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.0300
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	All smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	NA
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.4. Brief physician advice

1. Name of the parameter	**Effectiveness of brief physician advice**
1.1. Source	Aveyard, P., Begh, R., Parsons, A., & West, R. (2012). Brief opportunistic smoking cessation interventions: a systematic review and meta-analysis to compare advice to quit and offer of assistance. Addiction, 107(6), 1066-1073.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.400
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Smokers visiting GP and receiving brief counseling
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	NA
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.5. Cut down to quit

1. Name of the parameter	**Effectiveness of cut down to quit**
1.1. Source	Moore, D., Aveyard, P., Connock, M., Wang, D., Fry-Smith, A., & Barton, P. (2009). Effectiveness and safety of nicotine replacement therapy assisted reduction to stop smoking: systematic review and meta-analysis. Bmj, 338.
1.2 Parameter value(s)	Relative increase in quit attempts: 2.1000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Smokers who agree to cut down to quit
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	NA
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.6. Unassisted intervention

1. Name of the parameter	**Effectiveness of unassisted intervention**
1.1. Source	(these are all values provided by Robert West from a systematic review)
1.2 Parameter value(s)	Relative increase in quit attempts: 1.00
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

Prescribed single nicotine replacement therapy

1. Name of the parameter	**Effectiveness of prescribed single NRT**
1.1. Source	Stead, L. F., Perera, R., Bullen, C., Mant, D., Hartmann-Boyce, J., Cahill, K., & Lancaster, T. (2012). Nicotine replacement therapy for smoking cessation. Cochrane Database Syst Rev, 11(11).
1.2 Parameter value(s)	Relative increase in quit attempts: 1.6000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

Prescribed dual nicotine replacement therapy

1. Name of the parameter	**Effectiveness of prescribed dual NRT**
1.1. Source	Stead, L. F., Perera, R., Bullen, C., Mant, D., Hartmann-Boyce, J., Cahill, K., & Lancaster, T. (2012). Nicotine replacement therapy for smoking cessation. Cochrane Database Syst Rev, 11(11).
1.2 Parameter value(s)	Relative increase in quit attempts: 1.3400
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.7. Varenicline (standard duration)

1. Name of the parameter	**Effectiveness of varenicline (standard duration)**
1.1. Source	Cahill K, Stead LF, Lancaster T. Nicotine receptor partial agonists for smoking cessation. Cochrane Database of Systematic Reviews 2012, Issue 4. Art. No.: CD006103. DOI: 10.1002/14651858.CD006103.pub6.
1.2 Parameter value(s)	Relative increase in quit attempts: 2.3000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.8. Varenicline (extended duration)

1. Name of the parameter	**Effectiveness of varenicline (extended duration)**
1.1. Source	Tonstad, S., Tønnesen, P., Hajek, P., Williams, K. E., Billing, C. B., Reeves, K. R., & Varenicline Phase 3 Study Group. (2006). Effect of maintenance therapy with varenicline on smoking cessation: a randomized controlled trial. Jama, 296(1), 64-71.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.2000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.9. Bupropion

1. Name of the parameter	**Effectiveness of bupropion**
1.1. Source	Hughes, J. R., Stead, L. F., Lancaster, T., & Cochrane Database Syst Rev. (2014). Antidepressants for smoking cessation. Cochrane Database of Systematic Reviews: Reviews 2007, (1).
1.2 Parameter value(s)	Relative increase in quit attempts: 1.6000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

Nortriptyline

1. Name of the parameter	**Effectiveness of nortriptyline**
1.1. Source	Hughes, J. R., Stead, L. F., Lancaster, T., & Cochrane Database Syst Rev. (2014). Antidepressants for smoking cessation. Cochrane Database of Systematic Reviews: Reviews 2007, (1).
1.2 Parameter value(s)	Relative increase in quit attempts: 2.0000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

Cytisine

1. Name of the parameter	**Effectiveness of cytisine**
1.1. Source	Hajek, P., McRobbie, H., & Myers, K. (2013). Efficacy of cytisine in helping smokers quit: systematic review and meta-analysis. Thorax, 68(11), 1037-1042.
1.2 Parameter value(s)	3.3000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	NA
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**Not used in the Dutch context**
4. Limitations	
5. Transferability	-
6. Conflict of interest	-

8.10. Over-the-counter single nicotine replacement therapy

1. Name of the parameter	**Effectiveness of OTC single NRT**
1.1. Source	Stead, L. F., Perera, R., Bullen, C., Mant, D., Hartmann-Boyce, J., Cahill, K., & Lancaster, T. (2012). Nicotine replacement therapy for smoking cessation. Cochrane Database Syst Rev, 11(11).
1.2 Parameter value(s)	Relative increase in quit attempts: 1.6000
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.11. Specialist behavioural support: one-to-one

1. Name of the parameter	**Effectiveness of specialist behavioural support: one-to-one**
1.1. Source	Lancaster, T., & Stead, L. F. (2005). Individual behavioural counselling for smoking cessation. Cochrane Database Syst Rev, 2.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.40
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.12. Specialist behavioural support: group-based

1. Name of the parameter	**Effectiveness of specialist behavioural: group-based**
1.1. Source	Lancaster, T., & Stead, L. F. (2005). Individual behavioural counselling for smoking cessation. Cochrane Database Syst Rev, 2.
1.2 Parameter value(s)	Relative increase in quit attempts: 2.00
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.13. Telephone support: pro-active

1. Name of the parameter	**Effectiveness of telephone support: pro-active**
1.1. Source	Stead, L. F., & Lancaster, T. (2005). Group behaviour therapy programmes for smoking cessation. Cochrane Database Syst Rev, 2.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.40
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.14. SMS text messaging

1. Name of the parameter	**Effectiveness of SMS text messaging**
1.1. Source	Whittaker, R., McRobbie, H., Bullen, C., Borland, R., Rodgers, A., & Gu, Y. (2012). Mobile phone-based interventions for smoking cessation. Cochrane Database Syst Rev, 11.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.7100
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

8.15. Printed self-help materials

1. Name of the parameter	**Effectiveness of printed self-help materials**
1.1. Source	Hartmann-Boyce J, Lancaster T, Stead LF. Print-based self-help interventions for smoking cessation. Cochrane Database of Systematic Reviews 2014, Issue 6. Art. No.: CD001118. DOI: 10.1002/14651858.CD001118.pub3.
1.2 Parameter value(s)	Relative increase in quit attempts: 1.1900
2. How was the value obtained?	**Please provide info on the following:**
2.1 Target population/sub-group	Motivated smokers
2.2 Setting and location	NA
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	NA
2.10 Conversion	NA
2.11 (Statistical) model	NA
3. Assumptions	**NA**
4. Limitations	**-**
5. Transferability	**Derived from international literature; assumed to be transferable to the Dutch context**
6. Conflict of interest	**-**

9. Productivity Loses

9.1. Work days lost per smoker

1. Name of the parameter	**Lost work days per smoker**
1.1. Source	Gezondheid en zorg in cijfers, CBS, 2007 - http://www.loketgezondleven.nl/object_binary/o12346_factsheet-stoppen-met-roken.pdf
1.2 Parameter value(s)	6.6
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2007
2.10 Conversion	NA
2.11 (Statistical) model	23 sick days average smokers - 16.4 sick days average = 6.6
3. Assumptions	**23 sick days average smokers - 16.4 sick days average = 6.6**
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

9.2. Average hourly wage

1. Name of the parameter	**Average hourly wage**
1.1. Source	Handleiding voor kostenonderzoek (Hakkaart-van Roijenm Tan, & Bouwmans, 2010)
1.2 Parameter value(s)	29.2 (€2009)
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2009
2.10 Conversion	NA
2.11 (Statistical) model	2009 estimates based on 2008 using cao price index of 2.5%
3. Assumptions	2009 estimates based on 2008 using cao price index of 2.5%
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

9.3. Employability of the Dutch population

1. Name of the parameter	**Employability of the Dutch population**
1.1. Source	CBS statistics: http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLNL&PA=82309ned&D1=a&D2=0&D3=0&D4=0&D5=l&HD=160224-1448&HDR=G4&STB=G1,G2,G3,T
1.2 Parameter value(s)	65.4%
2. How was the value obtained?	
2.1 Target population/sub-group	The Netherlands
2.2 Setting and location	The Netherlands
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	2015
2.10 Conversion	NA
2.11 (Statistical) model	NA
3.	This number is the netto employability, reflecting the percentage individuals who

Assumptions	actually are employed from the whole Dutch population.
4. Limitations	**-**
5. Transferability	**Local data**
6. Conflict of interest	**-**

Annexed Tables

Table 1 Dutch population by age and sex 2015

Age	Total	Male	Female
0	174681	89200	85481
1	171587	88068	83519
2	176388	90389	85999
3	180486	92624	87862
4	185180	94447	90733
5	185874	95173	90701
6	186121	95467	90654
7	182919	93376	89543
8	186450	95697	90753
9	188291	96335	91956
10	194196	99111	95085
11	201043	102917	98126
12	202009	103363	98646
13	203920	104224	99696
14	207921	106060	101861
15	203234	104076	99158
16	202135	103488	98647
17	196758	100425	96333
18	197661	101698	95963
19	201205	102596	98609
20	209201	106496	102705
21	209863	106527	103336
22	213499	108394	105105
23	217379	109987	107392
24	219090	110918	108172
25	212104	106761	105343
26	210333	106050	104283
27	210997	106765	104232
28	210699	105884	104815
29	206541	103940	102601
30	203637	102760	100877
31	198397	99834	98563
32	199731	100368	99363
33	204007	101862	102145
34	206969	103679	103290
35	200407	100201	100206
36	201074	100342	100732

37	198140	98632	99508
38	200301	100324	99977
39	202078	100644	101434
40	211257	105095	106162
41	219074	108965	110109
42	237251	117802	119449
43	249140	124640	124500
44	260142	130316	129826
45	266003	133718	132285
46	254999	127958	127041
47	252511	127215	125296
48	254164	128025	126139
49	258240	130402	127838
50	262968	132572	130396
51	258304	130119	128185
52	253699	127207	126492
53	251034	125787	125247
54	244179	122399	121780
55	241775	121097	120678
56	234959	117653	117306
57	229715	114782	114933
58	225555	112953	112602
59	219382	109146	110236
60	215677	107846	107831
61	211829	105798	106031
62	211610	105751	105859
63	203469	101844	101625
64	203599	101587	102012
65	204833	102156	102677
66	209441	104450	104991
67	218499	108141	110358
68	223372	110680	112692
69	158287	77782	80505
70	163289	79867	83422
71	152781	74569	78212
72	138932	67255	71677
73	130097	62558	67539
74	130644	62026	68618
75	122728	57272	65456
76	116871	54156	62715
77	106130	48338	57792
78	101767	45662	56105
79	95038	41743	53295
80	89524	38266	51258
81	82687	34516	48171
82	79222	32091	47131

83	72196	28598	43598
84	66863	25430	41433
85	58415	21389	37026
86	52119	18356	33763
87	44635	15262	29373
88	39302	12746	26556
89	33150	10187	22963
90	28474	8135	20339
91	23750	6697	17053
92	18401	4753	13648
93	14442	3499	10943
94	11011	2594	8417
95	6952	1496	5456
96	4697	912	3785
97	3378	616	2762
98	2198	368	1830
99 or older	3560	513	3047

Table 2

Dutch actuary life tables in 2014		
Age	Male	Female
0 jaar	0.00363	0.00286
1 jaar	0.0004	0.00047
2 jaar	0.00025	0.00016
3 jaar	0.00011	0.00008
4 jaar	0.00011	0.00013
5 jaar	0.00006	0.00008
6 jaar	0.00013	0.00008
7 jaar	0.00009	0.00009
8 jaar	0.00005	0.00008
9 jaar	0.00011	0.00005
10 jaar	0.00008	0.00009
11 jaar	0.0001	0.00009
12 jaar	0.00012	0.00006
13 jaar	0.00013	0.00013
14 jaar	0.00006	0.0001
15 jaar	0.00011	0.00014
16 jaar	0.00023	0.00013
17 jaar	0.00026	0.00019
18 jaar	0.00028	0.0002
19 jaar	0.00035	0.00022
20 jaar	0.00032	0.00013
21 jaar	0.00027	0.00016
22 jaar	0.0003	0.00017
23 jaar	0.00026	0.0002
24 jaar	0.00043	0.00022
25 jaar	0.00048	0.00025
26 jaar	0.00036	0.00019
27 jaar	0.00044	0.00019
28 jaar	0.00044	0.00031
29 jaar	0.00041	0.0003
30 jaar	0.00045	0.00031
31 jaar	0.00061	0.00026
32jaar	0.00053	0.0003
33 jaar	0.00061	0.00034
34 jaar	0.00058	0.00039
35 jaar	0.00072	0.00033
36 jaar	0.00066	0.00034
37 jaar	0.00075	0.00054
38 jaar	0.00086	0.00044
39 jaar	0.0007	0.00062
40 jaar	0.00087	0.00052

41 jaar	0.00092	0.00076
42 jaar	0.00103	0.00089
43 jaar	0.00112	0.00093
44 jaar	0.00146	0.00089
45 jaar	0.00145	0.00119
46 jaar	0.00151	0.00127
47 jaar	0.00162	0.00143
48 jaar	0.00223	0.00135
49 jaar	0.00223	0.00182
50 jaar	0.00242	0.00187
51 jaar	0.00255	0.00227
52 jaar	0.00283	0.00227
53 jaar	0.0034	0.00273
54 jaar	0.00417	0.00277
55 jaar	0.00416	0.00322
56 jaar	0.00448	0.00345
57 jaar	0.00499	0.00382
58 jaar	0.00554	0.00423
59 jaar	0.00605	0.00472
60 jaar	0.00698	0.0051
61 jaar	0.00792	0.00578
62 jaar	0.00851	0.00566
63 jaar	0.0092	0.00678
64 jaar	0.00976	0.00683
65 jaar	0.01097	0.0074
66 jaar	0.01148	0.00835
67 jaar	0.01299	0.009
68 jaar	0.01481	0.00963
69 jaar	0.0169	0.0109
70 jaar	0.01821	0.01177
71 jaar	0.01981	0.01295
72 jaar	0.02184	0.01473
73 jaar	0.02375	0.01538
74 jaar	0.02686	0.01693
75 jaar	0.02943	0.01885
76 jaar	0.03338	0.0211
77 jaar	0.03776	0.02393
78 jaar	0.04151	0.02668
79 jaar	0.04829	0.03052
80 jaar	0.05532	0.03325
81 jaar	0.06087	0.03835
82 jaar	0.06967	0.04516
83 jaar	0.07679	0.05463
84 jaar	0.08608	0.06001
85 jaar	0.09943	0.06643
86 jaar	0.11217	0.07935

87 jaar	0.11976	0.08966
88 jaar	0.13788	0.09873
89 jaar	0.14999	0.11738
90 jaar	0.16733	0.13083
91 jaar	0.18006	0.15489
92 jaar	0.20702	0.16671
93 jaar	0.23508	0.18497
94 jaar	0.24684	0.20392
95 jaar	0.25517	0.22558
96 jaar	0.29738	0.25548
97 jaar	0.30752	0.26546
98 jaar	0.34752	0.31275
99 jaar	0.39433	0.36589

Table 3.1 Prevalence of smoking

	Current smoker (S)		Former (F)		Never-smoker (NS)	
Age	**men**	**women**	**men**	**women**	**men**	**women**
12-15	0.0427	0.0404	0.0262	0.0161	0.9311	0.9435
16-20	0.2485	0.2418	0.0857	0.1075	0.6658	0.6507
21-30	0.4294	0.3004	0.1117	0.1278	0.4589	0.5718
31-40	0.3183	0.2303	0.2481	0.2616	0.4336	0.5081
41-50	0.3202	0.2110	0.2574	0.2607	0.4224	0.5283
51-55	0.2823	0.2805	0.3050	0.3691	0.4127	0.3504
56-65	0.2832	0.2092	0.4658	0.4755	0.2510	0.3153
66-75	0.1770	0.1586	0.6023	0.4223	0.2207	0.4191
75+	0.0829	0.0794	0.7476	0.3650	0.1695	0.5556
Total	0.2762	0.2080	0.3101	0.2858	0.4137	0.5062

Table 3.2 Prevalence of smoking

	Heavy smokers	
Age	**men**	**women**
12-15	0.1872	0.1023
16-20	0.3082	0.2284
21-30	0.3027	0.3170
31-40	0.3936	0.2622
41-50	0.4910	0.3844
51-55	0.4381	0.4692
56-65	0.6148	0.4647
66-75	0.5463	0.3235
75+	0.4499	0.2823
Total	0.4293	0.3489

Table 1 Relative risk of LC by sex

Sex	Age	Smoking Status	RR	Lower CI	Upper CI	Notes	Source
Male	35-54	Current	14.33	13.0007	15.7953	imputed uncertainty	Surgeon General 2014, Table 12.3
Male	35-54	Former	4.4	4.0465	4.7843	imputed uncertainty	Surgeon General 2014, Table 12.3
Female	35-54	Current	13.3	12.2633	14.4244	imputed uncertainty	Surgeon General 2014, Table 12.3
Female	35-54	Former	2.64	2.5154	2.7707	imputed uncertainty	Surgeon General 2014, Table 12.3
Male	≥ 55	Current	24.97	22.2	28.09		Thun NEJM 2013
Male	≥ 55	Former	6.75	6.06	7.52		Thun NEJM 2013
Female	≥ 55	Current	25.66	23.17	28.4		Thun NEJM 2013
Female	≥ 55	Former	6.7	6.09	7.36		Thun NEJM 2013

Table 2 Relative risk of CHD

Sex	Age	Smoking Status	RR	Lower CI	Upper CI	Notes	Source
Male	35-54	Current	3.88	3.5290	4.2660	imputed uncertainty	Surgeon General 2014, Table 12.3
Male	35-54	Former	1.83	1.7144	1.9534	imputed uncertainty	Surgeon General 2014, Table 12.3
Female	35-54	Current	4.98	4.4396	5.5862	imputed uncertainty	Surgeon General 2014, Table 12.3
Female	35-54	Former	2.23	2.0198	2.4621	imputed uncertainty	Surgeon General 2014, Table 12.3
Male	55-64	Current	2.5	2.34	2.66		Thun NEJM 2013
Male	55-64	Former	1.43	1.37	1.48		Thun NEJM 2013
Female	55-64	Current	2.86	2.65	3.08		Thun NEJM 2013
Female	55-64	Former	1.44	1.38	1.51		Thun NEJM 2013
Male	≥ 65	Current	2.5	2.34	2.66		Thun NEJM 2013
Male	≥ 65	Former	1.43	1.37	1.48		Thun NEJM 2013
Female	≥ 65	Current	2.86	2.65	3.08		Thun NEJM 2013
Female	≥ 65	Former	1.44	1.38	1.51		Thun NEJM 2013

Table 3 Relative risk of COPD by sex

Sex	Age	Smoking Status	RR	Lower CI	Upper CI	Source
Male	35-54	Current	1	1.0000	1.0000	Surgeon General 2014, Table 12.3
Male	35-54	Former	1	1.0000	1.0000	Surgeon General 2014, Table 12.3
Female	35-54	Current	1	1.0000	1.0000	Surgeon General 2014, Table 12.3
Female	35-54	Former	1	1.0000	1.0000	Surgeon General 2014, Table 12.3
Male	≥ 55	Current	25.61	21.68	30.25	Thun NEJM 2013
Male	≥ 55	Former	7.05	6.07	8.19	Thun NEJM 2013
Female	≥ 55	Current	22.35	19.55	25.55	Thun NEJM 2013
Female	≥ 55	Former	8.09	7.19	9.1	Thun NEJM 2013

Table 4 Relative risk of Stroke by smoking status

Sex	Age	Smoking Status	RR	Lower CI	Upper CI	Source
Male	35-54	Current	1	1.0000	1.0000	
Male	35-54	Former	1	1.0000	1.0000	
Female	35-54	Current	1	1.0000	1.0000	
Female	35-54	Former	1	1.0000	1.0000	
Male	55-64	Current	1.92	1.66	2.21	
Male	55-64	Former	1.16	1.07	1.25	
Female	55-64	Current	2.1	1.87	2.36	
Female	55-64	Former	1.15	1.07	1.22	
Male	≥ 65	Current	1.92	1.66	2.21	
Male	≥ 65	Former	1.16	1.07	1.25	
Female	≥ 65	Current	2.1	1.87	2.36	
Female	≥ 65	Former	1.15	1.07	1.22	

Table 5 Inflation

Year	Consumer Price Index / Cost of Goods Relative to Base Year
2002	95.05
2003	97.18
2004	98.52
2005	100
2006	101.65
2007	103.26
2008	105.54
2009	106.57
2010	107.56
2011	110.23
2012	113.34
2013	116.24
2014	116.61
2015 August	117.53

Table 6 Prevalence of lung cancer

Age	Male	Female
0-14	0.00%	0.00%
15-29	0.00%	0.00%
30-44	0.01%	0.01%
45-59	0.10%	0.13%
60-74	0.50%	0.32%
75+	0.89%	0.24%

Table 7 Prevalence of CHD

Age	Male	Female
0-4	0.00%	0.00%
5-9	0.00%	0.00%
10-14	0.00%	0.00%
15-19	0.00%	0.00%
20-24	0.01%	0.01%
25-29	0.04%	0.02%
30-34	0.11%	0.06%
35-39	0.31%	0.14%
40-44	0.80%	0.33%
45-49	1.82%	0.72%
50-54	3.74%	1.42%
55-59	6.82%	2.60%
60-64	11.09%	4.36%
65-69	16.10%	6.72%
70-74	21.04%	9.54%
75-79	25.05%	12.49%
80-84	27.45%	15.15%
85+	27.99%	17.04%

Table 8 Prevalence of COPD

Age	**Male**	Female
0-4	0.08%	0.14%
5-9	0.08%	0.07%
10-14	0.16%	0.09%
15-19	0.22%	0.11%
20-24	0.23%	0.13%
25-29	0.23%	0.15%
30-34	0.26%	0.21%
35-39	0.36%	0.34%
40-44	0.57%	0.62%
45-49	0.94%	1.10%
50-54	1.53%	1.77%
55-59	2.38%	2.49%
60-64	3.53%	3.18%
65-69	5.50%	4.04%
70-74	8.51%	5.13%
75-79	11.98%	6.21%
80-84	13.47%	6.49%
85+	11.48%	5.77%

Table 9 Prevalence of Stroke

Age	Male	Female
0-4	0.08%	0.01%
5-9	0.05%	0.01%
10-14	0.04%	0.02%
15-19	0.04%	0.03%
20-24	0.04%	0.04%
25-29	0.05%	0.06%
30-34	0.08%	0.10%
35-39	0.12%	0.16%
40-44	0.21%	0.26%
45-49	0.38%	0.42%
50-54	0.70%	0.68%
55-59	1.25%	1.06%
60-64	2.15%	1.62%
65-69	3.46%	2.37%
70-74	5.10%	3.30%
75-79	6.73%	4.35%
80-84	7.81%	5.39%
85+	7.90%	6.18%

Table 13 Cost attributable to passive smoking in adults

	Disease	PAF			Percent		Total Cost	Attributable to Passive Smoking		Total Attributable to Passive Smoking	Year
		Men	Women	Source	Men	Women		Men	Women		
Adults	**Asthma**	0.11	0.13	Oberg 2010	0.418	0.582	229706000	10563998	17377055	27941053	2007
	Lung Cancer	0.01	0.02	Oberg 2010	0.59	0.407	465838305	2762872	3791021	6553894	2015
	Ischaemic Heart Disease	0.04	0.05	Oberg 2010	0.64	0.359	2444596441	62702980	43851098	106554077	2015
Total Costs										144910333	2015