

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 - GERMANY

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



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EQUIPTMOD Technical Manual

Appendix - GERMANY

This is a technical appendix to the main report describing the EQUIPT ROI Tool available from:

<http://equipt.eu/deliverables>

Country	Germany
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Version	1.1
Date	October 2016
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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 If the source is unpublished or the value comes from your own analysis, you must indicate so here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)?

<p>2.10 Conversion</p>	<p>Was any conversion involved in deriving the above value? If yes, describe method of conversion. If no, state, 'NA'.</p>
<p>2.11 (Statistical) model</p>	<p>Was the above value calculated using any (statistical) model? If yes, describe method of analysis. Include the following:</p> <ul style="list-style-type: none"> • 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? <p>If no, describe the non-model based calculation method.</p>
<p>3. Assumptions</p>	<p>List all assumptions underpinning the above value, as described in the source materials.</p>
<p>4. Limitations</p>	<p>List all important limitations of source materials</p>
<p>5. Transferability</p>	<p>Is there anything from the source material that may have implications in relation to applying/generalizing the value to EQUIPT countries?</p>
<p>6. Conflict of interest</p>	<p>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).</p>

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Abbreviations

ANOVA	Analysis of Variance
BOLD	Burden of Obstructive Lung Disease (study)
BZgA	Bundeszentrale für gesundheitliche Aufklärung
CHD	Coronary Heart Disease
CI	Confidence Interval
COPD	Chronic Obstructive Pulmonary Disease
CPS	Cancer Prevention Study
DEGS	„Studie zur Gesundheit Erwachsener in Deutschland“ (study)
EQ-5D	EuroQol-5Dimensions (questionnaire)
ESPro	Erlangen Stroke Project (study)
GOLD	Global Initiative on Obstructive Lung Disease
GP	General Practitioner
HRQOL	Health-Related Quality of Life
IQWiG	Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen
KiGGS	„Studie zur Gesundheit von Kindern und Jugendlichen in Deutschland“ (study)
KORA	Kooperative Gesundheitsforschung in der Region Augsburg (study)
LRTI	Lower Respiratory Tract Infection
NRT	Nicotine Replacement Therapy
NSCLC	Non-Small-Cell Lung Carcinoma
OTC	Over-The-Counter
p.a.	per annum (per year)
RKI	Robert Koch-Institut
Rx	Prescription

SE	Standard Error
SR	Sustained Release
VAS	Visual Analogue Scale
ZfKD	Zentrum für Krebsregisterdaten

1. General Data

1.1 Regional population details

1. Name of the parameter	Population by age and sex, Germany 2012 Average number of children per family Sterbetafel 2009/2011 Germany (Actuary Life Tables) The actuary life tables were incorporated into the model
1.1. Source	Federal Statistical Office https://www.destatis.de/DE/Startseite.html
1.2 Parameter value(s)	See Table 1, Table 2 and Table 3 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	German general population
2.2 Setting and location	Germany. Characteristics of (healthcare) system in that setting not found.
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	See respective table
2.9 Year	2009/2011
2.10 Conversion	NA
2.11 (Statistical) model	https://www.destatis.de/DE/Publikationen/Thematisch/Bevoelkerung/Bevoelkerungsbewegung/SterbetafelnAllgemeinErlaeuterung5126205129004.pdf?__blob=publicationFile

3. Assumptions	-
4. Limitations	-
5. Transferability	-
6. Conflict of interest	-

1. Name of the parameter	Population details: Smoking rate, Ex smoking rate
1.1. Source	Federal Statistical Office. Mikrozensus – Fragen zur Gesundheit; Available at: https://www.destatis.de/DE/Publikationen/Thematisch/Gesundheit/Gesundheitszustand/Rauchgewohnheiten5239004139004.pdf?__blob=publicationFile And Federal Statistical Office. Bevölkerung und Erwerbstätigkeit - Ausgangsdaten der Bevölkerungsfortschreibung aus dem Zensus 2011, available at: https://www.destatis.de/DE/Publikationen/Thematisch/Bevoelkerung/Bevoelkerungsstand/DatenBevoelkerungsfortschreibung/Zensus5124104119004.pdf?__blob=publicationFile
1.2 Parameter value(s)	See Table 4 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Rate of smokers and former smokers is considered, smoking population 18+ (aggregated from the source), derived from micro census
2.2 Setting and location	Representative survey of the German population German health care system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	The years 2009 (rates) and 2011 (population 18+) is considered
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Questionnaires are used to determine health parameters
2.9 Year	Micro census of 2009 and 2011
2.10 Conversion	NA
2.11 (Statistical) model	Descriptive statistics are used, no statistical model regarding the smoking and ex smoking rates, no uncertainty, the smokers 18+ are

	calculated by summing up the age and sex specific values
3. Assumptions	-
4. Limitations	-
5. Transferability	German specific values of the Federal Statistical Office
6. Conflict of interest	-

1. Name of the parameter	Regional population by age and sex
1.1. Source	Federal Statistical Office. Bevölkerung und Erwerbstätigkeit - Ausgangsdaten der Bevölkerungsfortschreibung aus dem Zensus 2011, available at: https://www.destatis.de/DE/Publikationen/Thematisch/Bevoelkerung/Bevoelkerungsstand/DatenBevoelkerungsfortschreibung/Zensus5124104119004.pdf?__blob=publicationFile
1.2 Parameter value(s)	See Table 5 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Whole population of Germany considered, stratified by age, sex, and region
2.2 Setting and location	Representative survey of the German population German health care system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	The year 2011 is considered
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	Micro census 2011
2.10 Conversion	NA
2.11 (Statistical) model	Descriptive statistics are used, no statistical model regarding the smoking and ex smoking rates, no uncertainty
3. Assumptions	-
4. Limitations	-

5. Transferability	German specific values of the Federal Statistical Office
6. Conflict of interest	-

1.2 Mortality rates

1. Name of the parameter	Death Rates (per 1000 population per year) by age and sex, calculations done in the past (calculation for a version of the model in the past) The relative risks taken from the Surgeon General’s Report are used for the model
1.1. Source	<p>Own calculation, based on Neubauer et al. 2006 (Neubauer S, Welte R, Beiche A, Koenig HH, Buesch K, Leidl R. Mortality, morbidity and costs attributable to smoking in Germany: update and a 10-year comparison. Tob Control. 2006; 15(6): 464-471);</p> <p>U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.</p> <p>And Federal Statistical Office (Todesursachen in Deutschland), available at: https://www.destatis.de/DE/Publikationen/Thematisch/Gesundheit/Todesursachen/Todesursachen2120400137004.pdf?__blob=publicationFile</p>
1.2 Parameter value(s)	See Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12 and Table 13/Table 14 (calculated death rates) in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	<p>Participants of the Telephone Health Survey 2003 (8,313 German-speaking people randomly selected from the resident population aged 18 years and over) (Neubauer et al. 2006);</p> <p>U.S. population (Report of the Surgeon General 2014)</p>
2.2 Setting and location	<p>Germany (Neubauer et al. 2006, Federal Statistical Office), USA (Report of the Surgeon General 2014)</p> <p>German healthcare system, US healthcare system</p>
2.3 Perspective	<p>Societal perspective for costs, but only prevalences were taken from the study (Neubauer et al. 2006)</p>

2.4 Interventions and comparators	No comparator for an intervention but the relative risks of current and former smokers are compared to lifetime never smokers (Report of the Surgeon General 2014)
2.5 Time horizon	Prevalences of the year 2003 (Neubauer et al. 2006)
2.6 Discount rate	3% for costs, but prevalences were taken from the study (Neubauer et al. 2006)
2.7 Choice of outcome	A telephone survey was used to derive the prevalences (Neubauer et al. 2006).
2.8 Measuring outcome	The relative mortality risks were identified in comparison to lifetime non-smokers. Those risks were taken from the Cancer Prevention Study, from merged contemporary cohorts and from the Women's Health Initiative (Report of the Surgeon General 2014).
2.9 Year	2003 (Neubauer et al. 2006, values from the Telephone Health Survey 2003)
2.10 Conversion	Some own calculations were done. See 2.11 (Statistical) model
2.11 (Statistical) model	Own calculation: Prevalences of smoking stratified by smoking status, age and sex (Neubauer et al. 2006) and population figures (Federal Statistical Office) are used to obtain numbers of prevalent cases by smoking status, sex and age. Relative mortality risks of former smokers and smokers compared to non-smokers (Surgeons General Report 2014) in combination with absolute numbers of deaths stratified by age and sex (Federal Statistical Office 2003) can be applied to arrive at death rates by smoking status, age and sex; Similar calculation method as in Menn et al. 2012 (Menn P, Leidl R, Holle R. A Lifetime Markov Model for the Economic Evaluation of Chronic Obstructive Pulmonary Disease. Pharmacoeconomics 2012; 30 (9): 825-840)
3. Assumptions	Age-specific and sexspecific proportion of former cigarette smokers to all former smokers assumed to be the same as reported in the Microcensus 2003 (Neubauer et al. 2006). RR estimates accurately represent those in the population of interest, furthermore it is assumed that the CPS-II RR estimates for younger adults are conservative (Report of the Surgeon General 2014).

4. Limitations	The overall smoking prevalence in Germany was not used, but only the prevalence of cigarette smokers (Neubauer et al. 2006) SAMMEC estimates are based on the prevalence of current and former smokers at the present time. The deaths that occur during a given year are primarily among persons who began smoking 30–50 years earlier. Using survey data to derive estimates of exposure as leads to uncertainty (Report of the Surgeon General 2014).
5. Transferability	The own calculations contain data from many national German sources, such that it would not be transferable to other EQUIPT countries
6. Conflict of interest	-

1.3 Smoking prevalence

1. Name of the parameter	Prevalence of smoking for men and women in Germany
1.1. Source	GEDA 2012 http://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GBEDownloadsF/Geda2012/rauchen.pdf?__blob=publicationFile
1.2 Parameter value(s)	See table 15 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Smoking population of a health survey, 26000 participant aged 18+
2.2 Setting and location	Representative survey of the German population German health care system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Prevalences of the year 2012
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Telephone health survey by RKI
2.9 Year	2012
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	Representative sample
4. Limitations	-
5. Transferability	German specific data, difficult to apply to other EQUIPT countries

6. Conflict of interest	-
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1. Name of the parameter	Proportion of smokers smoking 10+ cigarettes
1.1. Source	Own calculation, based on a graphic available at: http://de.statista.com/statistik/daten/studie/171251/umfrage/anzahl-der-gerauchten-zigaretten-pro-tag/
1.2 Parameter value(s)	70.27% of the smokers are smoking more than 10 cigarettes per day
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	The graphic considers smokers, stratified by numbers of cigarettes smoked a day
2.2 Setting and location	Information derived from a statistical online portal, online access to 1800 sources German healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Year 2013
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	Year 2013
2.10 Conversion	Own calculations, see 2.11 (Statistical model)
2.11 (Statistical) model	The given bar chart shows smokers according to their daily cigarette consumption; cigarette groups: 0-10, 10-20, 20+ cigarettes in absolute values; in order to get the proportion of smokers smoking 10+ cigarettes, the sum of the groups smoking more than 10 cigarettes has to be divided by the sum of all smokers
3. Assumptions	-
4. Limitations	-

5. Transferability	-
6. Conflict of interest	-

1.4 Relative Risks

1. Name of the parameter	The relative risks for smoking related diseases, part1: lung cancer in males and females aged 35-55 according to their smoking status, COPD in males and females aged 35-55 according to their smoking status, CHD in males and females aged 35-55 according to their smoking status, stroke in males and females aged 35-55 according to their smoking status
1.1. Source	U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.
1.2 Parameter value(s)	See Table 16 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	U.S. population
2.2 Setting and location	USA US healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	No comparator for an intervention but the relative risks of current and former smokers are compared to lifetime never smokers
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	The relative mortality risks were identified in comparison to lifetime non-smokers. Those risks were taken from the Cancer Prevention Study, from merged contemporary cohorts and from the Women's Health Initiative

2.9 Year	2003 (Neubauer et al. 2006, values from the Telephone Health Survey 2003)
2.10 Conversion	Some own calculations were done. See 2.11 (Statistical) model
2.11 (Statistical) model	See 2.8
3. Assumptions	RR estimates accurately represent those in the population of interest, furthermore it is assumed that the CPS-II RR estimates for younger adults are conservative
4. Limitations	SAMMEC estimates are based on the prevalence of current and former smokers at the present time. The deaths that occur during a given year are primarily among persons who began smoking 30–50 years earlier. Using survey data to derive estimates of exposure as leads to uncertainty
5. Transferability	Data from USA, incorporated for all EQUIPT countries
6. Conflict of interest	-

1. Name of the parameter	Relative risks in smokers and former smokers for smoking related diseases, part2: lung cancer in males and females aged 55+ according to their smoking status, COPD in males and females aged 55+ according to their smoking status, CHD in males and females aged 55+ according to their smoking status, stroke in males and females aged 55+ according to their smoking status
1.1. Source	Thun MJ, Carter BD, Feskanich D, et al. 50-Year Trends in Smoking-Related Mortality in the United States. N Engl J Med 2013;368:351-64.
1.2 Parameter value(s)	See Table 17 and Table 18 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Participants of an age of at least 55 years were involved
2.2 Setting and location	USA, three studies already conducted in the past are considered (CPS I, CPS II and contemporary cohort, data taken from contemporary cohort) US healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	50 year time span
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Temporal trends in mortality across three time periods were measured
2.9 Year	The trends considered in the paper where derived from three time periods: 1959-1965, 1982-1988, 2000-2010
2.10 Conversion	NA
2.11 (Statistical) model	In order to calculate relative risk estimates (age-adjusted, multivariable-adjusted, according to smoking status), cox-

	proportional-hazards regressions were performed, former smokers compared to never smokers and current smokers compared to never smokers
3. Assumptions	-
4. Limitations	Results represent whites, 50 years of age or older, born between 1870 and 1954, risk among younger contemporary smokers couldn't be assessed
5. Transferability	Relative risks are used in many EQUIPT countries
6. Conflict of interest	-

1.5 Discount rate for costs and utilities

1. Name of the parameter	Discount rate for utilities and costs
1.1. Source	Schad M, John J. Towards a social discount rate for the economic evaluation of health technology in Germany: an exploratory analysis. Eur J Health Econ 2012; 13:127–144
1.2 Parameter value(s)	3% , differential discounting as a sensitivity analysis
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	No population but economic theory as a basis
2.2 Setting and location	Economic theory as a basis
2.3 Perspective	German Statutory Health Insurance
2.4 Interventions and comparators	NA
2.5 Time horizon	Described as “longterm”
2.6 Discount rate	Discount rate is the parameter under consideration, described as the social rate of time preference (SRTP)
2.7 Choice of outcome	Value is derived from various theories, e.g. tax-based or using the Ramsey equation
2.8 Measuring outcome	Theoretical background based on preferences, e.g. the individual’s rate of time preference
2.9 Year	-
2.10 Conversion	NA
2.11 (Statistical) model	Rather economic modelling approach than statistical modelling. Ramsey equation, observed market behavior
3. Assumptions	The market behaviour approach essentially rests on the assumption that the market results of individual private decisions can provide sufficiently valid guidance for policy makers optimal growth rate approach: society wants policy makers, when

	deciding about public investments, to base their decisions on a well-behaved social welfare function and make choices about those investments in order to maximize society's welfare now and in the future
4. Limitations	-
5. Transferability	Value explicitly applied to the German context
6. Conflict of interest	Financial support for this research was received from GlaxoSmithKline, Sanofi Pasteur MSD and Wyeth Pharma

1.6 Threshold value for QALY

No threshold value exists for Germany

1.7 Inflation rates

1. Name of the parameter	Country Specific Inflation Adjustment
1.1. Source	Federal Statistical Office https://www.destatis.de/DE/Publikationen/Thematisch/Preise/Verbraucherpreise/VerbraucherpreisindexLangeReihen.html
1.2 Parameter value(s)	See Table 19 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	-
2.2 Setting and location	Germany. Characteristics of (healthcare) system in that setting not found.
2.3 Perspective	NA
2.4 Interventions and comparators	-
2.5 Time horizon	Annual
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	NA
2.9 Year	1996 – 2015
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-
4. Limitations	-
5. Transferability	No transferability
6. Conflict of interest	-

2. Disease Prevalence

2.1 Lung cancer prevalence

1. Name of the parameter	(1-year overall) Prevalence of lung cancer, needed for the calculation of lung cancer costs
1.1. Source	Own calculation, using prevalence data from Robert Koch Institute and population details from the federal statistical office
1.2 Parameter value(s)	0,00038 for lung cancer, see Table 20 and Table 21 in the appendix for the inputs of the calculation
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Prevalence for the German population calculated
2.2 Setting and location	Own calculations, no study
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Calculations for the year 2010
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Outcome tables used to calculate one single figure for the whole population in Germany
2.9 Year	-
2.10 Conversion	NA
2.11 (Statistical) model	Own calculation method based on population figures and disease prevalences
3. Assumptions	-

4. Limitations	-
5. Transferability	-
6. Conflict of interest	-

1. Name of the parameter	Prevalence of Lung Cancer (per 100.000)
1.1. Source	German Centre for Cancer Registry Data (ZfKD) http://www.rki.de/Krebs/DE/Datenbankabfrage/datenbankabfrage_stufe1_node.html
1.2 Parameter value(s)	See Table 22 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	German cancer patients.
2.2 Setting and location	Germany. Characteristics of (healthcare) system in that setting not found.
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	Prevalence per 100.000
2.8 Measuring outcome	NA
2.9 Year	2010
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-
4. Limitations	-
5. Transferability	-
6. Conflict of interest	-

2.2 Coronary Heart Disease (CHD) prevalence

1. Name of the parameter	(Overall) Prevalence of CHD, needed for the calculations of CHD costs
1.1. Source	Own calculation, using prevalence data from Robert Koch Institute and population details from the federal statistical office
1.2 Parameter value(s)	0.05, see Table 23 and Table 24 in the appendix for the inputs of the calculation
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Prevalence for the German population calculated
2.2 Setting and location	Own calculations, no study
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Calculations for the year 2010
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Outcome tables used to calculate one single figure for the whole population in Germany
2.9 Year	-
2.10 Conversion	NA
2.11 (Statistical) model	Own calculation method based on population figures and disease prevalences
3. Assumptions	-
4. Limitations	-
5. Transferability	-

6. Conflict of interest	-

1. Name of the parameter	Prevalence of CHD
1.1. Source	Robert Koch-Institut (Hrsg) (2012) Daten und Fakten: Ergebnisse der Studie »Gesundheit in Deutschland aktuell 2010«. Beiträge zur Gesundheitsberichterstattung des Bundes. RKI, Berlin http://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GBEDownloadsB/Geda2010/koronare_herzerkrankung.pdf?__blob=publicationFile
1.2 Parameter value(s)	See Table 25 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	22050 people aged 18+ answered some questions regarding their health status in the GEDA study of 2010
2.2 Setting and location	Characteristics of (healthcare) system in that setting not found
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Lifetime prevalence
2.6 Discount rate	NA
2.7 Choice of outcome	Certain definition of CHD used, see below
2.8 Measuring outcome	Persons were asked if a coronary heart disease has been diagnosed during their lives. Definition of CHD diagnosis: circulatory disorder at the heart, narrowing of coronary vessels, or a myocardial infarction
2.9 Year	2010
2.10 Conversion	NA
2.11 (Statistical) model	Persons were asked
3. Assumptions	-
4. Limitations	Only persons which had the diagnosis and which survived the disease; not always symptoms can be observed, therefore underestimation of the true prevalence possible;

5. Transferability	German specific values, rather not applicable to other EQUIPT countries
6. Conflict of interest	-

2.3 Chronic Obstructive Pulmonary Disease (COPD) prevalence

1. Name of the parameter	Population prevalence for COPD in Germany
1.1. Source	<p>1. Buist, A. S., Vollmer, W. M., & McBurnie, M. A. (2008). Worldwide burden of COPD in high- and low-income countries. Part I. The burden of obstructive lung disease (BOLD) initiative. <i>Int J Tuberc Lung Dis</i>, 12(7), 703-708.</p> <p>1. Buist, A. S., McBurnie, M. A., Vollmer, W. M., Gillespie, S., Burney, P., Mannino, D. M., Menezes, A. M., Sullivan, S. D., Lee, T. A., Weiss, K. B., Jensen, R. L., Marks, G. B., Gulsvik, A., & Nizankowska-Mogilnicka, E. (2007). International variation in the prevalence of COPD (the BOLD Study): a population-based prevalence study. <i>Lancet</i>, 370(9589), 741-750.</p>
1.2 Parameter value(s)	Men: 18.1%; Women: 9.3% and see Table 26 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Non-institutionalized adults aged ≥ 40 years were recruited using population-based sampling plans
2.2 Setting and location	Worldwide study, values partly derived in Hannover, Germany
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	Data from 2006, studies from 2007 and 2008
2.10 Conversion	NA
2.11 (Statistical) model	Logistic regression models.
3. Assumptions	-

4. Limitations	<p>The absolute number of patients with COPD within any particular site is generally small, thus limiting power for specific types of within-site analyses.</p> <p>Lower than desirable response rates at some sites could have introduced the potential for response bias.</p>
5. Transferability	Useful if no better country specific values are available
6. Conflict of interest	Several pharma companies were named in the acknowledgements

2.4 Stroke prevalence

1. Name of the parameter	Prevalence of Stroke
1.1. Source	Busch MA, Schienkiewitz A, Nowossadeck E, Gößwald A. Prävalenz des Schlaganfalls bei Erwachsenen im Alter von 40 bis 79 Jahren in Deutschland. Ergebnisse der Studie zur Gesundheit Erwachsener in Deutschland (DEGS1). Bundesgesundheitsbl 2013; 56: 656 - 660
1.2 Parameter value(s)	See Table 27 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	A health monitoring study in Germany was used ("Studie zur Gesundheit Erwachsener in Deutschland", DEGS), which covers age groups between 18 and 79; regarding prevalences of stroke ages between 40 and 79 were considered.
2.2 Setting and location	Germany German healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Lifetime prevalence of stroke was considered
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Lifetime prevalence asked by questionnaire
2.9 Year	Study was conducted between 2008 and 2011
2.10 Conversion	NA
2.11 (Statistical) model	Frequency for calculation of the proportion of strokes in each age and sex stratum needed; Uncertainty is given via a 95% Confidence interval; for persons under 40, which were not covered by the study a lifetime prevalence of 0 % is assumed for the EQUIPT tool

3. Assumptions	-
4. Limitations	Strokes diagnosed by a physician are based on self-reports of the participants, persons with major disabilities after a stroke are underrepresented
5. Transferability	For the age groups under examination the study showed similar values regarding the lifetime prevalence of stroke compared to other national and international studies
6. Conflict of interest	-

3. Disease Costs

3.1 Lung cancer costs

1. Name of the parameter	Total annual cost of lung cancer
1.1. Source	Luengo-Fernandez R, Leal J, Gray A, Sullivan R. Economic burden of cancer across the European Union: a population-based cost analysis. <i>Lancet Oncol</i> 2013; 14: 1165–74
1.2 Parameter value(s)	€ 1341000000 (original value) ; Value was used to calculate the annual costs of lung cancer per person using German population data of 2009 and the disease prevalence of lung cancer (see the section lung cancer prevalence of this technical documentation), value was taken from the supplementary appendix (calculated value: 43140.22 € per person diseased per year)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Population based national and international sources were used by the authors to calculate costs of cancer
2.2 Setting and location	Sources made it possible to give cost values of cancer for the European Union Characteristics of (healthcare) system not found
2.3 Perspective	Societal perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	Annual costs are derived from source and used to calculate annual costs per person
2.6 Discount rate	Future lost earnings are discounted with 3.5% p.a., also the effect of discounting productivity costs using rates of 0% and 10% was assessed
2.7 Choice of outcome	The cancer types colorectal cancer, lung cancer, breast cancer and prostate cancer were considered, and costs of all cancers are listed
2.8 Measuring outcome	Aggregated country-specific data could be derived from various

	sources, statistical institutions, reports, journals, or extrapolation from similar countries if no data was available
2.9 Year	2009
2.10 Conversion	Own calculations using a lung cancer prevalence of 0.00038 (see lung cancer prevalences) and the German population consisting of 81802000 people in 2009
2.11 (Statistical) model	The same methodological framework as in Leal et al. 2012 was used (Leal J, Luengo-Fernandez R, Gray A. Economic costs. In: Nichols M, Townsend N, Scarborough P, Rayner M, eds. 2012 European cardiovascular disease statistics. Brussels: European Society of Cardiology, 2012.)
3. Assumptions	It is assumed that only patients severely limited in daily activities or who were terminally ill would receive informal care. Some assumptions and extrapolations for the number of primary-care, outpatient-care and emergency visits attributable to cancer had to be made
4. Limitations	The precision of the results depended on the quality and availability of comparable cancer-related data across the EU; overall costs are likely to be more complete than cancer-specific costs because overall healthcare costs were derived from the System of Health Accounts; only antineoplastic drugs and endocrine therapy for the treatment of cancer were included in the analysis, i.e. no immunosuppressants, opioids, or antiemetic drugs due to lack of data; for some countries data of similar countries had to be combined; the costs for sick leave and early retirement due to incapacity did not include expenditure for sick leave Benefits; prevalence based approach used is problematic for cancers which cumulate costs over several years; estimates are likely to be underestimates; finally, economic trends could influence the results
5. Transferability	Analysis of 27 European values enables to get costs for other countries involved in EQUIPT
6. Conflict of interest	The authors declare that there are no conflicts of interest

3.2 Coronary Heart Disease (CHD) costs

1. Name of the parameter	Annual costs of CHD
1.1. Source	Leal J, Luengo-Fernandez R, Gray A. Economic costs. In: Nichols M, Townsend N, Scarborough P, Rayner M, eds. 2012 European cardiovascular disease statistics. Brussels: European Society of Cardiology, 2012
1.2 Parameter value(s)	€ 5413538000 (original value from the publication), € 1323.57 (per person per year, based on own calculations using the original value, the prevalence of CHD (see the section Coronary Heart Disease prevalence of this technical documentation) and the German population of 2009)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Costs for CHD are considered, for the whole country
2.2 Setting and location	International study which covers many data sources, No information on healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Annual total healthcare costs of CHD in Germany are taken from the source
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Descriptive statistics based on several sources
2.9 Year	2009
2.10 Conversion	Own calculations using a CHD prevalence of 0.05 (see CHD prevalences) and the German population consisting of 81802000 people in 2009

2.11 (Statistical) model	Descriptive statistics are shown, no causal analysis
3. Assumptions	-
4. Limitations	Europe suffers from a lack of data, e.g. for prevalences and incidences, comparability of many estimates is relatively low
5. Transferability	Analysis of several European values enables to get costs for other countries involved in EQUIPT
6. Conflict of interest	-

3.3 Chronic Obstructive Pulmonary Disease (COPD) costs

1. Name of the parameter	Annual cost of chronic obstructive pulmonary disease
1.1. Source	1. Nowak, D., Dietrich, E. S., Oberender, P., Uberla, K., Reitberger, U., Schlegel, C., Albers, F., Ruckdaschel, S., & Welsch, R. (2004). [Cost-of-illness Study for the Treatment of COPD in Germany]. <i>Pneumologie</i> , 58(12), 837-844.
1.2 Parameter value(s)	3027 EUR (societal perspective), 1944 EUR (German health insurance system, this value was incorporated into the model)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	321 randomly selected patients from the pre-study which was conducted in practices for pulmonary and general medicine.
2.2 Setting and location	Germany
2.3 Perspective	Payer 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	Costs associated with resource consumption were weighted with the frequencies of COPD severity grades as assessed in the pre-study to determine the costs of COPD.
2.9 Year	2001
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-
4. Limitations	Lack of intangible costs

5. Transferability	-
6. Conflict of interest	-

3.4 Stroke costs

1. Name of the parameter	Annual cost of stroke
1.1. Source	Kolominsky-Rabas PL, Heuschmann PU, Marschall D et al. Lifetime Cost of Ischemic Stroke in Germany: Results and National Projections From a Population-Based Stroke Registry. The Erlangen Stroke Project. Stroke. 2006;37:1179-1183 And own calculations
1.2 Parameter value(s)	6918.77, value is derived from own calculation based on Kolominsky-Rabas et al. 2006 and see Table 28 in the appendix for input of the calculations, furthermore life years needed for the calculation can be found in the publication
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	ESPro is a prospective population-based stroke registry
2.2 Setting and location	Study population from Erlangen (Bavarian city in the south of Germany Characteristics of (healthcare) system in that setting not found
2.3 Perspective	Perspective of statutory health insurance
2.4 Interventions and comparators	NA
2.5 Time horizon	Lifetime costs of stroke are considered. Those are accumulated over 7.3 years of the disease on average for men and women combined. Own calculation leads to costs per year by dividing the costs by 7.3 => costs per year for a stroke patient
2.6 Discount rate	3% p.a.
2.7 Choice of outcome	NA
2.8 Measuring outcome	Longitudinal costs per stroke were calculated using survival analysis
2.9 Year	Analysis was performed for the year 2004
2.10 Conversion	Own calculations into a value per year

2.11 (Statistical) model	Survival analysis was used by Kolominsky-Rabas et al. 2006 to estimate longitudinal costs per stroke
3. Assumptions	It is assumed that the population was stable with respect to age and sex composition and that the age-specific incidence, prognosis, and costs of stroke were constant; furthermore some assumptions regarding projections were made
4. Limitations	Patterns of stroke aftercare may differ in rural or remote parts of Germany, and long-term data from these regions would complement the national cost projections; outpatient services occasioned by stroke were not distinguished from those occasioned by other pre-existing or new-onset diseases
5. Transferability	-
6. Conflict of interest	Support by Federal Ministry of Research, registration is funded by the Federal Ministry of Health and Social Affairs and the Bavarian Ministry for Health, Nutrition & Consumer Protection, data analysis was supported by an unrestricted grant from MSD Sharp & Dohme GmbH, some other cooperation partner who helped are mentioned

4. Interventions

4.1 Intervention costs

1. Name of the parameter	Costs for NRT:
1.1. Source	Own calculations, based on Doc Morris (Online pharmacy), available at: https://www.docmorris.de
1.2 Parameter value(s)	Mono NRT (OTC): 317.49 €, Combo NRT (OTC): 296.10 €
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Original values derived from an online pharmacy, available for everyone, therefore targeted at smoking population 18+
2.2 Setting and location	No study, pharmacy retail price found on the web page Characteristics of (healthcare) system in that setting not found'
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Price of the year 2015
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Source material shows the values available at Doc Morris and in addition for comparison purposes the official pharmacy retail prices which were taken from the source
2.9 Year	The year of the costs is 2015
2.10 Conversion	Average costs of certain brands are averaged to arrive at an overall value for OTC Mono NRT and OTC Combo NRT
2.11 (Statistical) model	Cost per quit attempt for each NRT packaging size of each available brand of a certain NRT product was calculated based on UK-data and some recommendations common in Germany (consumption of a

	<p>certain product type per quit attempt), the calculated values then are averaged to arrive at an overall value e.g. for nicotine patches. In order to estimate the overall Mono NRT value, an 80% weight for patches, 5% weight for gums and 15% weight for other NRT products is used; the combination NRT always contains the NRT form patch within a possible combination, for which 80% were assumed, for the second product of a combination a weight of 20% was used</p>
3. Assumptions	The weights: 80% for patches, 5% for gums, 15% for other NRTs (OTC Mono NRT) or 80% for patches and 20% for other NRT forms (Combo NRT), respectively
4. Limitations	Assumptions in part based on UK data
5. Transferability	Approach similar to the approach seen within the UK model, could also be applied in other EQUIPT countries
6. Conflict of interest	-

1. Name of the parameter	Costs for Bupropion:
1.1. Source	Own calculations, based on packages of the supplier Glaxo Smith Cline; prices available at: http://www.onmeda.de/Medikament/Zyban+150mg+Retardtabletten-wirkung+dosierung.html
1.2 Parameter value(s)	Average value of 214.13€
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Original values derived from an online health portal, targeted at smoking population (18+?)
2.2 Setting and location	No study, price found on the web page Characteristics of (healthcare) system in that setting not found'
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Price of the year 2015
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Source material shows the values available at Onmeda, further calculations were needed (see calculation method below)
2.9 Year	The year of the costs is 2015
2.10 Conversion	Costs of the different packaging sizes are used to arrive at an overall value for Bupropion
2.11 (Statistical) model	Some recommendations on how to quit were given at Onmeda: 6 days followed by consumption of two tablets per day for 7-9 weeks; three potential cost scenarios within this range of consumption duration are calculated and then averaged; for each scenario the most suitable combinations of packaging sizes were used
3. Assumptions	Calculation of suitable scenarios and averaging leads to an

	approximation regarding average costs of the application
4. Limitations	Assumptions in part based on UK data
5. Transferability	Approach similar to the approach seen within the UK model, could also be applied in other EQUIPT countries
6. Conflict of interest	-

1. Name of the parameter	Costs for Varenicline:
1.1. Source	Own calculations, based on official pharma retail price; https://www.docmorris.de/search?query=champix&t=3211baeb-c572-42ae-9f3e-2c71c57b325a
1.2 Parameter value(s)	Average value of 292.53€
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Original values derived from an online health portal, targeted at smoking population (18+?)
2.2 Setting and location	No study, price found on the web page Characteristics of (healthcare) system in that setting not found'
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Price of the year 2015
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Source material shows the values available at Onmeda, further calculations were needed (see calculation method below)
2.9 Year	The year of the costs is 2015
2.10 Conversion	Costs for the different suppliers are averaged
2.11 (Statistical) model	The two suppliers, Pfizer and Kohlpharma GmbH, offer a starter and a follow up package; this combination of starter and follow up package is considered as a possible consumption scenario for each of suppliers, dosing recommendations by pharmacies used as a basis for calculation
3. Assumptions	Calculation of suitable scenarios and averaging leads to an approximation regarding average costs of the application

4. Limitations	Assumptions in part based on UK data
5. Transferability	Approach similar to the approach seen within the UK model, could also be applied in other EQUIPT countries
6. Conflict of interest	-

1. Name of the parameter	Costs of interventions (data not available for Germany)
Parameter value(s)	Taxation increase, Indoor-smoking ban, Social marketing, SMS text messaging, taken from the English version of the model
See the technical report from England for further details	

1. Name of the parameter	Behavioural therapy (group)
1.1. Source	1. Wenig, J. R., Erfurt, L., Kroger, C. B., & Nowak, D. (2013). Smoking cessation in groups--who benefits in the long term? Health Educ Res, 28(5), 869-878.
1.2 Parameter value(s)	Insurance: 80 EUR, Out-of-pocket cost: 170 EUR, 4 hours before quit attempt, 5 hours afterwards; overall value of 250 EUR (80 + 170)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	1319 smokers
2.2 Setting and location	Routine care setting Germany
2.3 Perspective	NA
2.4 Interventions and comparators	4 hours group therapy before quit attempt, 5 hours afterwards but no comparator
2.5 Time horizon	NA
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Longitudinal field study with a one group pre-post-follow-up design
2.9 Year	January to March and May to November in 2009
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-
4. Limitations	-
5. Transferability	Unless the same program does not exist in other countries, no direct transferability
6. Conflict of interest	-

1. Name of the parameter	Behavioural therapy (one-to-one)
1.1. Source	Association of Statutory Health Insurance Physicians: https://www.kvberlin.de/20praxis/30abrechnung_honorar/10ebm/
1.2 Parameter value(s)	One hour one-to-one therapy, at a certified psychotherapist, consists of 819 points and each point is valued by 10.2718 Cents. 3.5 hours (which resemble the minimum amount of time for the respective therapy intervention in the UK) therefore amount to around 295 EUR.
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Everyone who demands therapy at a certified psychotherapist at standard rate
2.2 Setting and location	Germany
2.3 Perspective	NA
2.4 Interventions and comparators	One-to-one therapy
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	-
3. Assumptions	Assuming standard rate (→certain therapists will charge more)
4. Limitations	-
5. Transferability	-

6. Conflict of interest	-

1. Name of the parameter	EQUIPT Intervention Costs: Self-help books and booklets Further costs not taken from the publication: Proactive telephone support, Internet support, computer based intervention, CDs, DVDs
1.1. Source	Kröger CB, Piontek D. Tabakentwöhnung in Deutschland. Grundlagen und kommentierte Übersicht. 3. erweiterte und überarbeitete Auflage 2011. Bundeszentrale für gesundheitliche Aufklärung (BZgA) 2011
1.2 Parameter value(s)	See Table 29 in the appendix, the value for self-help books and booklets is 12.50 €
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Smoker
2.2 Setting and location	BZgA, an independent public institution in Germany Based on US study Characteristics of (healthcare) system in that setting not found
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	-
2.10 Conversion	For the costs of self-help booklets and books, a range was given in the publication, of which the mean value was incorporated into the EQUIPT model
2.11 (Statistical) model	Meta-analysis of several studies
3. Assumptions	-
4. Limitations	American source, mentioned within the German publication of the BZgA

	(Bundeszentrale für gesundheitliche Aufklärung)
5. Transferability	American source used within publication
6. Conflict of interest	Independent public institution within public health sector, no conflicts of interest exist

1. Name of the parameter	Brief physician advice
1.1. Source	Kassenärztliche Bundesvereinigung http://www.kbv.de/html/13259.php?q=beratung%20rauchen&srt=relevance&stp=fulltext&sch=true&c=11
1.2 Parameter value(s)	9.24 €
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Reimbursement for physicians in Germany
2.2 Setting and location	Characteristics of (healthcare) system in that setting 'not found'
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	Code 04230 and code 23220 are applicable
2.8 Measuring outcome	NA
2.9 Year	2015
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-
4. Limitations	-
5. Transferability	German specific reimbursement value
6. Conflict of interest	-

4.2 Intervention uptakes

1. Name of the parameter	Uptake of interventions (data available for Germany)
1.1. Source	Kroeger CB, Gomes de Matos E, Piontek D, Wenig JR. Quitting Attempts and Utilisation of Smoking Cessation Aids among Smokers in Germany: Results from the 2012 Epidemiological Survey of Substance Abuse. Gesundheitswesen 2015 [in German] And further own calculations based on the source
1.2 Parameter value(s)	See table 30 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Representative sample of German smokers, aged 18 – 64 years
2.2 Setting and location	Where was the study from which you have obtained the above value conducted? German healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Descriptive statistics for the year 2012 were produced
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Within this survey the targeted people were approached in writing, by telephone or via the internet
2.9 Year	The survey took place in 2012
2.10 Conversion	Uptakes were given for people who are motivated to quit (at least one serious quit attempt in the past two years), those values were converted such that uptakes are expressed in values related to the whole smoking population

2.11 (Statistical) model	<p>No statistical model. Participants of the survey filled in a questionnaire in which multiple answers were possible. Post stratification weights were used in order to achieve a representative sample.</p> <p>Where the uptake value is given in a too high aggregated form disaggregation was done via own calculations: the aggregated value was split up such that the relative uptake of the disaggregated parts reflects the relation of the English values but sums up to the overall aggregated German value; this calculation method was applied for group therapy (into one-to-one support and group based), pharmacotherapy and for NRT</p>
3. Assumptions	-
4. Limitations	<p>There could still be some selection effects, non-response-bias, or recall bias as a questionnaire is used. Some people, e.g. without a residence, are not within the sample.</p> <p>The fact which uptake value is taken from the publication depends on the interventions implemented in the model. That means that there are some German interventions mentioned in the source which are not taken from the publication as no effectiveness data is available and therefore no implementation in the model</p>
5. Transferability	German specific uptake values, therefore could be problematic to be transferred to other EQUIPT countries
6. Conflict of interest	-

1. Name of the parameter	Uptake of interventions (data not available for Germany)
Parameter value(s)	Taxation increase, Indoor-smoking ban, Social marketing, SMS text messaging, taken from the English version of the model
See the technical report from England for further details	

4.2 Intervention effectiveness

1. Name of the parameter	Effectiveness of interventions (data not available for Germany)
Parameter value(s)	OTC Mono NRT, OTC Combo NRT, Varenicline (standard duration), Varenicline (extended duration), Bupropion, Specialist behavioural support: one-to-one, Specialist behavioural support: group-based, Telephone support: pro-active, SMS text messaging, Printed self-help materials, Brief physician advice, Taxation increase, Indoor-smoking ban, Social marketing
See the technical report from England for further details as the parameters are taken from the English model	

1. Name of the parameter	Long term smoking cessation rate
1.1. Source	<p>Tabakentwöhnungsmaßnahmen in Deutschland C. Kröger, S. Gradl IFT Institut für Therapieforschung München Bundesgesundheitsbl 2010; 53:201–206 DOI 10.1007/s00103-009-1008-0 Online publiziert: 25. Dezember 2009 © Springer-Verlag 2009</p> <p>Original source: 1. Hughes, J. R., Keely, J., & Naud, S. (2004). Shape of the relapse curve and long-term abstinence among untreated smokers. <i>Addiction</i>, 99(1), 29-38.</p>
1.2 Parameter value(s)	0,03-0,05, a value of 0.05 was incorporated into the model based on calculations of Robert West
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Prospective studies of self-quitters or studies that included a no-treatment control group.
2.2 Setting and location	USA. Characteristics of (healthcare) system in that setting not found
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	6-12 months abstinence
2.8 Measuring outcome	NA
2.9 Year	Studies before December 2001
2.10 Conversion	NA
2.11 (Statistical) model	-
3. Assumptions	-

4. Limitations	Results may underestimate the rate of success in self-quitting.
5. Transferability	-
6. Conflict of interest	-

5. Motivation to Quit

5.1 Smokers who made a quit attempt in the previous 12 months

1. Name of the parameter	Motivation to quit: Smokers who made a quit attempt in the previous 12 months
1.1. Source	<p>Several publications; mainly Boyle P, Gandini S, Robertson C et al. Characteristics of smokers' attitudes towards stopping. Survey of 10,295 smokers in representative samples from 17 European countries. EUROPEAN JOURNAL OF PUBLIC HEALTH 2000; 10 (3 SUPPLEMENT): 5-14</p> <p>Thyrian JR, Panagiotakos DB, Polychronopoulos E, West R, Zatonski W, John U. The relationship between smokers' motivation to quit and intensity of tobacco control at the population level: a comparison of five European countries. BMC Public Health 2008; 8:2</p>
1.2 Parameter value(s)	<p>Boyle et al. 2000: 38% are motivated to quit in Germany; Thyrian et al. 2008: 29.8% are (definitely) motivated in Germany; other publications: Range 33%-40% according to several smoking motivation studies in Germany: e.g. Dohnke et al. 2011 (40%) (Dohnke B, Weiss-Gerlach E, Spies CD. Social influences on the motivation to quit smoking: Main and moderating effects of social norms. Addictive Behaviors 2011; 36: 286-293); Meyer et al. 2003 (33%) (Meyer C, Rumpf HJ, Schumann A, Hapke U, John U. Intentionally reduced smoking among untreated general population smokers: prevalence, stability, prediction of smoking behavior change and differences between subjects choosing either reduction or abstinence. Addiction 2003; 98: 1101-1110)</p> <p>A value of 35% motivation is chosen as a base case, a value which can also be found in Thyrian 2008 across European countries</p>
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	10,295 smokers in representative samples from 17 European countries aged 18 or older (Boyle et al. 2000); 1750 smokers, aged 16–59 (Thyrian et al. 2008), representative sample of smokers,
2.2 Setting and location	Several European countries including Germany and the UK and other European countries

	Characteristics of (healthcare) system not found
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	Smoker was defined as someone who smokes at least once a day (Boyle et al. 2000)
2.8 Measuring outcome	A questionnaire was set up in English by several experts and translated into other languages. Individual, face-to-face interviews were conducted using a semi-structured questionnaire (Boyle et al. 2000); Representative telephone survey created in English and translated afterwards (Thyrian et al.2008)
2.9 Year	2006 (Thyrian et al. 2008)
2.10 Conversion	NA
2.11 (Statistical) model	Mainly descriptive statistics were calculated from the filled questionnaires, e.g. proportion of people with at least one quit attempt in some specific subgroups in the population, subjects with a given severity of dependence as an example of a subgroup (Boyle et al. 2000)
3. Assumptions	-
4. Limitations	There are limitations to this analysis. First, the concept of the stages of change has been debated, its measurement has been called arbitrary and there has been a call for abandoning the underlying model. The authors used a modified stage algorithm that was found to be predictive of quitting activity after 7 months, depending on different quitting plans. They added a simple assessment of the motivation to change smoking to further differentiate motivation into wanting and intending to quit. Second, the common limitations for telephone surveys of smoking variables apply to this study (retention, missing biochemical validation, validity, etc.). However, conducting assessments across

	<p>five different countries by phone is the most cost-effective way to gather this information and constitutes a state of the art approach. There might also be a selection bias, since females are over represented, even though we chose the last birthday method. Third, tobacco control activities may take years to have an effect, so one needs to look not just cross-sectionally, but historically as well as concurrently. Fourth, the definition of tobacco control activity and therefore the selection of the countries for the survey might not be well chosen for the research question as previously discussed. A research design evaluating a greater variety of countries and other criteria for selection might be needed. (Thyrian et al. 2008)</p>
<p>5. Transferability</p>	<p>Values for several other European countries are given, including Spain, the Netherlands and UK (Boyle et al. 2000); values for UK and other European countries are also given (Thyrian et al. 2008)</p>
<p>6. Conflict of interest</p>	<p>This work was conducted within the framework of support by the Italian Association for Cancer Research (Associazione Italiana per la Ricerca sul Cancro). SmithKline Beecham provided financial support for a meeting of participants from each country to discuss the study findings, through an unrestricted research grant. No honoraria were paid to participants in this study (Boyle et al. 2000). No competing interests (Thyrian 2008)</p>

6. Utilities

1. Name of the parameter	Utilities regarding smoking status (no good data available for Germany)
Parameter value(s)	Utility for smokers, former smokers, never smokers, ex-occasional smokers, ex-regular smokers. Light smokers, moderate smokers and heavy smokers
See the technical report from England for further details as the parameters are taken from the English model	

6.1 Lung cancer utility

1. Name of the parameter	Utility for lung cancer (no good data available for Germany)
Parameter value(s)	Utility for lung cancer
See the technical report from England for further details as the parameters are taken from the English model	

6.2 Coronary Heart Disease (CHD) utility

1. Name of the parameter	Utility for CHD (no good data available for Germany)
Parameter value(s)	Utility for CHD
See the technical report from England for further details as the parameters are taken from the English model	

6.3 Chronic Obstructive Pulmonary Disease (COPD) utility

1. Name of the parameter	Utility for COPD (no good data available for Germany)
Parameter value(s)	Utility for COPD
See the technical report from England for further details as the parameters are taken from the English model	

6.4 Stroke utility

1. Name of the parameter	Utility for stroke (no good data available for Germany)
Parameter value(s)	Utility for stroke
See the technical report from England for further details as the parameters are taken from the English model	

7. Passive Smoking

7.1 Cost attributable to passive smoking in children

1. Name of the parameter	Cost attributable to passive smoking in children
Parameter value(s)	Population attributable fractions, derived from Oberg 2010, inflation adjustments and the costs of passive smoking related diseases in children (see section 7.3) are used to derive the total inflated costs for children regarding passive smoking, see Table 31 in the appendix for the PAFs
See the technical report from England for further details	

7.2 Cost attributable to passive smoking in adults

1. Name of the parameter	Cost attributable to passive smoking in adults
Parameter value(s)	Population attributable fractions, derived from Oberg 2010, inflation adjustments and the costs of passive smoking related diseases in adults (see section 7.3 and additional calculations using prevalences and health care costs of lung cancer and CHD) are used to derive the total inflated costs for adults regarding passive smoking, see Table 32 in the appendix for the PAFs
See the technical report from England for further details	

7.3 Passive smoking related disease

1. Name of the parameter	Passive smoking related disease: Children Lower Respiratory Infections
1.1. Source	Ehlken B, Ihorst G, Lippert B et al. Economic impact of community-acquired and nosocomial lower respiratory tract infections in young children in Germany. Eur J Pediatr 2005; 164: 607-615
1.2 Parameter value(s)	€ 213 million for children and infants aged 0 – 3 years
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Infants and children up to the age of 36 months with lower respiratory tract infection (pneumonia, obstructive bronchitis, bronchitis, bronchiolitis, croup, and in infants less than 6 months, with apnoea)
2.2 Setting and location	German population of children of less than three years (PRI.DE as a prospective, multi-centre, epidemiological study) German health care system
2.3 Perspective	Third party payer, parent and society performed in the paper
2.4 Interventions and comparators	NA
2.5 Time horizon	Annual costs are shown in the paper
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Costs were given by the three categories: Office-based, hospitalized cases and nosocomial cases regarding lower respiratory tract infections; these costs can be summed up to arrive at the € 213 million mentioned above
2.9 Year	Study conducted from 1999 to 2001
2.10 Conversion	NA

2.11 (Statistical) model	The economic burden of LRTI in Germany was estimated using the median value of total costs. For the components of the economic burden (office-based, hospitalized, nosocomial cases) the 95% confidence intervals were given
3. Assumptions	-
4. Limitations	Value based on a weak influenza season, therefore leading to lower economic burden of lower respiratory tract infection compared to stronger seasons of influenza
5. Transferability	Population-based character of the study made it possible to generalize the results (for Germany vs. for other European countries?)
6. Conflict of interest	The PRI.DE study was financially supported by Wyeth GmbH, Münster, Germany. The Center for Clinical Trials receives funding by the BMBF (Federal Ministry of Education and Research)

1. Name of the parameter	Passive smoking related disease: Children Otitis Media
1.1. Source	Own calculation, based on Wolleswinkel-van den Bosch et al. 2010 (Wolleswinkel-van den Bosch JH, Stolk EA, Francois M, Gasparini R, Brosa M. The health care burden and societal impact of acute otitis media in seven European countries: Results of an Internet survey. Vaccine 28S (2010) G39–G52); Liese et al. 2014 (Liese JG, Silfverdal SA, Giaquinto C et al. Incidence and clinical presentation of acute otitis media in children aged <6 years in European medical practices. Epidemiol. Infect. (2014); 142: 1778–1788) and Federal Statistical Office (available at: https://www-genesis.destatis.de/genesis/online/data;jsessionid=D4F21109336CF01467DDEE3E2BC2A05F.tomcat_GO_2_1?operation=abruftabelleBearbeiten&levelindex=1&levelid=1441038353596&auswahloperation=abruftabelleAuspraegungAuswaehlen&auswahlverzeichnis=ordnungsstruktur&auswahlziel=werteabruf&selectionname=12411-0006&auswahltext=%23Z-31.12.2013&nummer=5&variable=2&name=GES&werteabruf=Werteabruf)
1.2 Parameter value(s)	Costs of Otitis Media (OM), Age 0-4: 706 Euros per case (total), direct costs: 108 Euros; Incidence of OM: 279 per 1000 life-years; numbers of children ≤ 4 years in Germany from the statistical office (See Table 33 in the appendix)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Children ≤ 4 years of age whose parents participated in an Internet access panel of Survey Sampling (market research agency) (Wolleswinkel-van den Bosch et al. 2010); children ≤ 5 years of age from paediatric practices in Europe, value available for Germany (Liese et al. 2014), German population from the Federal Statistical Office
2.2 Setting and location	Germany and several European countries including Germany Characteristics of (healthcare) system in that setting not found
2.3 Perspective	Societal perspective (Wolleswinkel-van den Bosch et al. 2010) and public health perspective (Liese et al. 2014)
2.4 Interventions and comparators	NA

2.5 Time horizon	Data on children ≤ 4 years from statistical office on a cutoff date for the year 2013; differing period lengths of disease (Wolleswinkel-van den Bosch et al. 2010); incidence during the 12 months retrospective study period (Liese et al.2014)
2.6 Discount rate	NA
2.7 Choice of outcome	Answers on an online questionnaire were used to derive the direct and indirect costs per episode of physician-confirmed otitis media, also DRGs (diagnosis related groups) were used (Wolleswinkel-van den Bosch et al. 2010)
2.8 Measuring outcome	The estimate of the incidence rate is based on a formula containing the total number of subjects in the cohort under study or in a subgroup of this cohort, the number of otitis media episodes and the number of days of the surveillance period (Liese et al. 2014)
2.9 Year	2007 (Wolleswinkel-van den Bosch et al. 2010) and 2008-2009 (Liese et al. 2014), 31.12.2013 Federal Statistical Office
2.10 Conversion	UK values were converted into Euros (Wolleswinkel-van den Bosch et al. 2010)
2.11 (Statistical) model	The incidence rate of acute otitis media was calculated using a formula and using SAS 9.1 and Excel 2002 SP3 or later. The exact Poisson confidence limit method was used to calculate confidence intervals (Liese et al. 2014) Descriptive statistics (proportions, means, medians, standard deviations [SDs]) were generated for resources and costs. Mean values were used to estimate the costs for an episode of acute otitis media (Wolleswinkel-van den Bosch et al. 2010)
3. Assumptions	-
4. Limitations	Study population may be different from the general population due to the recruitment process, possibility that some visits especially to other medical facilities were not included leading to an underestimation of the incidence, parent-reporting not affected by that (Liese et al.2014) the surveyed population may not be representative of the general population because of the need for Web access; AOM diagnoses by physicians were not confirmed using the medical record; the population was not representative of the whole population; there

	<p>was a bias toward children with recurrent episodes; there were differences in employment rates across countries. (Wolleswinkel-van den Bosch et al. 2010)</p>
<p>5. Transferability</p>	<p>Some European countries are considered within analysis: Belgium (Flanders), France, Germany, Italy, The Netherlands, Spain, and the United Kingdom (Wolleswinkel-van den Bosch et al. 2010); Germany, Italy, Spain, Sweden, and the UK (Liese et al. 2014)</p>
<p>6. Conflict of interest</p>	<p>Funding for this study was provided by Glaxo- SmithKline Biologicals. Judith H. Wolleswinkel-van den Bosch is an employee of Pallas, health research and consultancy, an independent research organization, and maintained independent scientific control over the study, including data analysis and interpretation of final results. Max Brosa is the director of Oblikue Consulting, a health outcomes agency that has contracted with GSK on previous health economic studies. Elly Stolk, Martine Francois, and Roberto Gasparini have no conflicts of interest. GlaxoSmithKline Biologicals, Wavre, Belgium, provided financial support.above parameter value in the EQUIPT project (e.g. the value comes from pharma-sponsored study). (Wolleswinkel-van den Bosch et al. 2010)</p> <p>J.L. received fees for participating in review activities from GlaxoSmithKline group of companies. He received institutional grants from GlaxoSmithKline group of companies for epidemiological studies on varicella/herpes zoster and influenza. He received payment for participating in advisory board from GlaxoSmithKline group of companies, Novartis, Sanofi Pasteur MSD and AstraZeneca. He received payment for consultancy from GlaxoSmithKline group of companies and AstraZeneca. He received lectures fees from GlaxoSmithKline group of companies, Sanofi Pasteur MSD, AstraZeneca, Abbott and Pfizer. He received travel grant support for participation in congresses on infectious diseases from GlaxoSmithKline group of companies, Sanofi Pasteur, Pfizer and CSL Behring. S.A.S. received institutional grant from GlaxoSmithKline group of companies for travel to attend scientific meeting. He received payment from GlaxoSmithKline group of companies for giving a lecture on pneumococcal disease. He received payment from GlaxoSmithKline group of companies and AstraZeneca for participation in advisory boards. C.G. received payment from GlaxoSmithKline group of companies for consultancy, for given lectures and for participating in advisory board. He also received institutional grants from GlaxoSmithKline group of companies. J.H.L. received institutional payment from the</p>

	<p>National Institute for Health Research (NIHR) to support costs related to recruitment of subjects and data collection. J.G.S. received institutional grant from GlaxoSmithKline group of companies. M.G.S. received payment from GlaxoSmithKline group of companies for expert testimony and for participating in advisory boards. She received payment from GlaxoSmithKline group of companies and Sanofi Pasteur MSD for giving lectures and for development of educational presentations. M.L.A. received payment and institutional grants from GlaxoSmithKline group of companies. She received travel grant from GlaxoSmithKline group of companies for participation as a speaker at 60th Congress of the Spanish Association of Paediatrics, Valladolid, 16–18 June 2011. W.K. is employed by GlaxoSmithKline group of companies and has stock options. J.V. is employed by GlaxoSmithKline group of companies and has stock options. K.H. is employed by GlaxoSmithKline group of companies. J.Y.P. is employed by GlaxoSmithKline group of companies. M.R.R. was employed by GlaxoSmithKline group of companies at the time the study was conducted. He had stock options and now has shares from GlaxoSmithKline group of companies. (Liese et al. 2014)</p>
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1. Name of the parameter	Passive smoking related disease: Children Asthma
1.1. Source	Own calculation, based on Aumann et al. 2014 (Aumann I, Prenzler A, Welte T, Gillissen A. Epidemiology and Costs of Asthma in Germany – a Systematic Literature Review. Pneumologie 2014; 68: 557–567) using a cost value of Weinmann et al. 2003; Kirsch et al. 2013 (Kirsch F, Teuner CM, Menn P, Leidl R. Costs of Illness for Asthma and COPD in Adults in Germany. Gesundheitswesen 2013; 75: 413–423) using values of Stock et al. 2005; And publication from Federal Statistical Office, available at: https://www.destatis.de/DE/Publikationen/Thematisch/Preise/Verbraucherpreise/VerbraucherpreisindexLangeReihen.html
1.2 Parameter value(s)	Costs of asthma per case: 476 € per person (Aumann et al. 2014), numbers of children who have asthma: 844670 (Kirsch et al. 2013), Inflation: 1.05025 (Federal Statistical Office, see also Table 34 in the appendix)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Costs per person for children up to an age of 8 years (Aumann et al. 2014), people with asthma who are below and above the age of being adult (Kirsch et al. 2013) and value representing the inflation via the consumer prices
2.2 Setting and location	Studies from Germany and the publication from Federal Statistical Office in Germany German health care system
2.3 Perspective	Social insurance perspective (Aumann et al. 2014)
2.4 Interventions and comparators	NA
2.5 Time horizon	Costs per person per year (Aumann et al. 2014), numbers of people who contracted asthma related to a given time period (Kirsch et al. 2013); inflation rate to inflate costs from 1996 to 2000 (Federal Statistical Office)
2.6 Discount rate	Results of the studies were inflated to the year 2010 (Kirsch et al. 2013), inflation rate from the Federal Statistical Office is used for own calculations

2.7 Choice of outcome	NA
2.8 Measuring outcome	Outcomes were based on single parameters
2.9 Year	Costs of 1996 (Aumann et al. 2014)
2.10 Conversion	The costs from the original source Weinmann et al. 2003 were given in USD, conversion to Euros by the authors (Aumann et al. 2014)
2.11 (Statistical) model	No statistical model, but the costs of 1996 were transformed into Euros, inflated to the year of 2000 and multiplied by the numbers of children having asthma; mostly done by own calculations
3. Assumptions	For the conversion to 2010 values some assumptions had to be made: calculation of indirect costs via the average annual gross compensation of employees, the usage of an index for the average trend of compensation of employees, choice of per capita average values as comparisons, loss of precision, missing price increases or decreases which are due to technical progress (Kirsch et al. 2013);
4. Limitations	In some studies the quantities and the monetary valuation are not presented unambiguous, results depending on the study population and costing method (Kirsch et al. 2013) Results of the different studies influenced by the survey method, the study population, range of studies on children is wider than of studies regarding adults, also the questioning plays an important role, perspective, the costs considered, treatment options (Aumann et al. 2014)
5. Transferability	Values rather suitable for Germany than for other EQUIPT countries
6. Conflict of interest	No financial connections with firms which have products mentioned in the article, Support partly by “Kompetenznetz Asthma/COPD” financed by the Federal Ministry of Education and Research (Kirsch et al. 2013); No conflicts of interest of Aumann, Prenzler and Gillissen, Welte received funding for scientific presentations, projects and consulting (Aumann et al. 2014)

1. Name of the parameter	Passive smoking related disease: Adult Asthma
1.1. Source	Own calculation, based on Stock et al. 2005 (Stock S, Redaelli M, Luengen M, Wendland G, Civello D, Lauterbach KW. Asthma: prevalence and cost of illness. Eur Respir J 2005; 25: 47–53 And Kirsch et al. 2013 (Kirsch F, Teuner CM, Menn P, Leidl R. Costs of Illness for Asthma and COPD in Adults in Germany. Gesundheitswesen 2013; 75: 413–423);
1.2 Parameter value(s)	Total costs (i.e. for both sexes, indirect and direct costs, adults and children) of asthma: 2.74 billion € (Stock et al. 2005), proportion of direct costs in relation to total costs: 25.2% (Stock et al. 2005), proportion of both sexes regarding total costs: 49.3% for Men , derived from a table (Stock et al 2005), proportion of adults among asthma patients: 81% , derived from a table (Kirsch et al. 2013)
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	People with asthma who are below and above the age of being adult (Kirsch et al. 2013), people with asthma in the German statutory health insurance, claims data from all insured persons of six large sickness funds (Stock et al. 2005)
2.2 Setting and location	Studies from Germany German health care system
2.3 Perspective	Societal perspective (Stock et al. 2005)
2.4 Interventions and comparators	NA
2.5 Time horizon	Numbers of people who contracted asthma related to a given time period (Kirsch et al. 2013), the costs of 2.74 billion € were accumulated during the year 1999
2.6 Discount rate	Results of the studies were inflated to the year 2010 (Kirsch et al. 2013)
2.7 Choice of outcome	NA
2.8 Measuring outcome	Outcomes were based on single parameters
2.9 Year	1999 (Stock et al. 2005)

2.10 Conversion	NA
2.11 (Statistical) model	The total asthma costs can be stratified into adults and children, male and female, direct and indirect costs by own calculations
3. Assumptions	For the conversion to 2010 values some assumptions had to be made: calculation of indirect costs via the average annual gross compensation of employees, the usage of an index for the average trend of compensation of employees, choice of per capita average values as comparisons, loss of precision, missing price increases or decreases which are due to technical progress (Kirsch et al. 2013); prevalence of asthma in private insured patients is assumed to be 5% (Deutsche Krankenversicherungs AG, personal communication) (Stock et al. 2005)
4. Limitations	In some studies the quantities and the monetary valuation are not presented unambiguous, results depending on the study population and costing method (Kirsch et al. 2013)
5. Transferability	Values rather suitable for Germany than for other EQUIPT countries
6. Conflict of interest	No financial connections with firms which have products mentioned in the article, Support partly by “Kompetenznetz Asthma/COPD” financed by the Federal Ministry of Education and Research (Kirsch et al. 2013)

8. Productivity Losses

8.1 Work days lost per smoker

1. Name of the parameter	Lost work days per smoker (number of absent days from work)
1.1. Source	Wacker M, Holle R, Heinrich J et al. The association of smoking status with healthcare utilization, productivity loss and resulting costs: results from the population-based KORA F4 study. BMC Health Services Research 2013; 13: 278
1.2 Parameter value(s)	8.4117647, Std Dev 22.9094609
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	German KORA S4 study (Cooperative Health Research in the Augsburg Region), population based study, adults aged 25 – 74, Follow-up study of KORA F4
2.2 Setting and location	Study was conducted in the city of Augsburg in the south of Germany German healthcare system
2.3 Perspective	Costs were derived from a societal perspective
2.4 Interventions and comparators	NA
2.5 Time horizon	Numbers of absent working days (=> 218 is maximum, not 365) from work in the past 12 months
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Mean value was calculated from the data set used in Wacker et al. 2013
2.9 Year	KORA F4 study was conducted in 2006-2008
2.10 Conversion	Value calculated from data set used in Wacker et al. using SAS

2.11 (Statistical) model	Mean value was calculated from the data set
3. Assumptions	factors influencing the number of healthcare service uses were analyzed with generalized linear models assuming a zero-truncated negative binomial distribution with a log-link
4. Limitations	Participants were asked about absent days such that there could be a recall bias (cross-sectional design), selection bias is also possible; errors regarding the definition of absent working days (218 is maximum, not 365), perhaps social desired answers could be given by the participant, only a snapshot and not a life cycle approach within the study
5. Transferability	Generalizing to Germany is imaginable (from city of Augsburg)
6. Conflict of interest	No competing interests. Sponsors were not involved in the study design, collection, analysis and interpretation of data; in the writing of the manuscript; and in the decision to submit the manuscript.

8.2 Average hourly wage

1. Name of the parameter	Average hourly wage
1.1. Source	Statistisches Bundesamt 2010. Durchschnittlicher Stundenlohn von Beschäftigten, available at: https://www.destatis.de/DE/ZahlenFakten/Indikatoren/QualitaetArbeit/Dimension2/2_5_Stundenlohn.html
1.2 Parameter value(s)	15.54 €
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	Employees aged 15-64 are considered, who were neither in apprenticeship, nor in education, nor in partial retirement
2.2 Setting and location	Calculations of the federal statistical office of Germany German healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Calculations are for the year 2010
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	-
3. Assumptions	-
4. Limitations	Employees of agriculture and in enterprises with up to ten employees can't be found within calculations

5. Transferability	Different wages in different EU countries
6. Conflict of interest	-

8.3 Employment among smokers

1. Name of the parameter	Proportion of smokers who are employed (employment among smokers)
1.1. Source	Schunck R, Rogge BG. Unemployment and Smoking: Causation, Selection, or Common Cause? Evidence from Longitudinal Data. SOEPpapers on Multidisciplinary Panel Data Research (DIW Berlin), available at: http://www.diw.de/documents/publikationen/73/diw_01.c.409934.de/diw_sp0491.pdf
1.2 Parameter value(s)	Baseline value of 0.89 was calculated from a table within the publication (Table 1 of the publication). See Table 35 in the appendix
2. How was the value obtained?	Please provide info on the following:
2.1 Target population/sub-group	65,823 observations from 18,735 respondents, aged 18-60 years, SOEP (socio economic panel) as a representative longitudinal survey of German households (since 1984)
2.2 Setting and location	Representative longitudinal German survey German healthcare system
2.3 Perspective	NA
2.4 Interventions and comparators	NA
2.5 Time horizon	Descriptive statistics based on a panel are used to derive the above value
2.6 Discount rate	NA
2.7 Choice of outcome	NA
2.8 Measuring outcome	Own calculations based on descriptive data
2.9 Year	SOEP 1998-2008
2.10 Conversion	Own calculations to derive the proportion of smokers who are unemployed using table 1 of Schunck et al. 2012

2.11 (Statistical) model	For example logistic regression is used to predict unemployment probability, but for the proportion of smokers who are unemployed only descriptive statistics of the panel are used
3. Assumptions	Random variable assumption for regression analysis
4. Limitations	Observational => causal inference is difficult; problems of fixed effects models; self-reports on smoking were used => possible bias
5. Transferability	-
6. Conflict of interest	-

Annexed Tables

Table 1: Population by age and sex, Germany 2012

Age	Males	Females
0	345979	328417
1	339576	322307
2	346208	328653
3	341942	323509
4	351459	333821
5	352393	333068
6	346148	326290
7	352313	334060
8	364745	346412
9	365314	346883
10	372553	353143
11	381799	361334
12	398210	378516
13	399821	378892
14	407770	387912
15	420569	400183
16	413750	392191
17	400321	379089
18	403876	382014
19	420310	398381
20	440376	421855
21	460253	440586
22	508269	486567
23	504166	484536
24	520678	498586
25	512705	490526
26	504863	488222

27	492762	480738
28	495013	483130
29	500542	489754
30	515560	503347
31	510302	502768
32	507055	500892
33	484141	477887
34	478808	471817
35	474979	468255
36	465783	461252
37	454178	448293
38	459815	457049
39	464979	462374
40	506839	502088
41	562866	554132
42	586479	576721
43	634609	618851
44	666131	649338
45	684766	668506
46	707061	687739
47	711690	688894
48	724522	703708
49	718330	698981
50	693543	678821
51	681189	672952
52	656659	653070
53	639025	635240
54	602721	600315
55	588196	588128
56	569603	573726
57	548459	559249

58	533078	552995
59	512669	537116
60	510661	536452
61	498346	524552
62	495641	523126
63	479165	504517
64	437795	459619
65	407626	433213
66	352821	377851
67	305825	335377
68	407017	445967
69	410319	451129
70	393771	436852
71	469308	532188
72	484211	559585
73	466117	549180
74	423962	506934
75	383416	469423
76	356927	449530
77	329991	427118
78	291582	388264
79	221060	305501
80	205993	296794
81	194593	293050
82	188183	297674
83	166772	276357
84	148991	258017
85 und mehr	542320	1450266
Insgesamt	39381131	41142615

Table 2: Average number of children per family

In Germany 1,38 children per women.
Statistisches Bundesamt 2012

Table 3: Sterbetafel 2009/2011 Germany (Actuary Life Tables)

Age	male	female
0	0.003868	0.003153
1	0.000327	0.000264
2	0.000189	0.000149
3	0.000139	0.000112
4	0.000133	0.000119
5	0.000108	0.000101
6	0.000106	0.000087
7	0.000082	0.000086
8	0.000083	0.000074
9	0.000079	0.000069
10	0.000089	0.000071
11	0.000086	0.000080
12	0.000111	0.000081
13	0.000111	0.000090
14	0.000150	0.000108
15	0.000178	0.000126
16	0.000260	0.000154
17	0.000339	0.000160
18	0.000481	0.000228
19	0.000489	0.000207
20	0.000538	0.000222
21	0.000540	0.000209
22	0.000531	0.000224
23	0.000523	0.000229
24	0.000560	0.000202

25	0.000549	0.000220
26	0.000581	0.000237
27	0.000633	0.000269
28	0.000601	0.000253
29	0.000658	0.000287
30	0.000640	0.000283
31	0.000714	0.000302
32	0.000735	0.000354
33	0.000763	0.000366
34	0.000793	0.000425
35	0.000840	0.000398
36	0.000881	0.000475
37	0.000949	0.000534
38	0.001099	0.000557
39	0.001148	0.000662
40	0.001283	0.000706
41	0.001370	0.000802
42	0.001529	0.000890
43	0.001783	0.001024
44	0.001989	0.001123
45	0.002215	0.001269
46	0.002474	0.001409
47	0.002887	0.001635
48	0.003207	0.001768
49	0.003584	0.002058
50	0.004001	0.002203
51	0.004731	0.002447
52	0.005006	0.002745
53	0.005520	0.003007
54	0.006193	0.003191
55	0.006766	0.003543

56	0.007289	0.003772
57	0.008045	0.003997
58	0.008794	0.004412
59	0.009543	0.004722
60	0.010392	0.005389
61	0.011165	0.005747
62	0.011989	0.006308
63	0.012643	0.006738
64	0.014096	0.007349
65	0.015059	0.007810
66	0.016541	0.008554
67	0.017880	0.009132
68	0.019148	0.009711
69	0.020943	0.010622
70	0.022768	0.011605
71	0.024928	0.012877
72	0.027109	0.014478
73	0.0298497	0.0162612
74	0.0338675	0.0186075
75	0.0374376	0.0214579
76	0.0416177	0.0244928
77	0.0467458	0.0277237
78	0.0528201	0.0320683
79	0.0588541	0.0363059
80	0.0650528	0.0417656
81	0.072853	0.0475904
82	0.0803283	0.0551443
83	0.087904	0.062712
84	0.098191	0.072316
85	0.108635	0.082755
86	0.120912	0.094223

87	0.135247	0.108292
88	0.148309	0.122287
89	0.167268	0.141517
90	0.175996	0.154796
91	0.199820	0.177687
92	0.216351	0.189226
93	0.234661	0.207253
94	0.253544	0.225883
95	0.272935	0.245054
96	0.292769	0.264705
97	0.312984	0.284771
98	0.333514	0.305192
99	0.354295	0.325903
100	0.375266	0.346845

Table 4: Population 18+, smoking rate and ex smoking rate

		Population 18+	Smoking rate	Ex smoking rate
Deutschland	DE	67538844	0,245	0,193
Baden-Württemberg	DE-BAWU	8701790	0,223	0,203
Bayern	DE-BAYE	10365762	0,222	0,179
Berlin	DE-BERL	2812816	0,288	0,201
Brandenburg	DE-BRAN	2127754	0,258	0,211
Bremen	DE-BREM	554606	0,277	0,198
Hamburg	DE-HAMB	1446912	0,256	0,174
Hessen	DE-HESS	5001883	0,234	0,194
Mecklenburg-Vorpommern	DE-MEVO	1400299	0,282	0,184
Niedersachsen	DE-NIED	6473856	0,247	0,199
Nordrhein-Westfalen	DE-NOWE	14662512	0,259	0,192
Rheinland-Pfalz	DE-RHPF	3351909	0,238	0,210
Saarland	DE-SAAR	856295	0,235	0,193
Sachsen	DE-SACH	3527327	0,228	0,167
Sachsen-Anhalt	DE-SAAN	2005484	0,279	0,170
Schleswig-Holstein	DE-SCHO	2340809	0,258	0,212
Thüringen	DE-THUR	1908830	0,261	0,206

Table 5: Regional population by region, age and sex

	M	M	M	M	M	M
	0	1	2	3	4	5
DE	112 477	346 278	342 132	352 287	353 152	347 117
DE-BAWU	15 247	46 855	46 293	47 646	48 004	47 741
DE-BAYE	17 899	53 781	53 530	55 108	55 050	54 427
DE-BERL	5 585	16 831	16 206	16 258	15 840	14 646
DE-BRAN	3 068	9 914	9 785	10 096	10 134	9 842
DE-BREM	938	2 851	2 786	2 730	2 808	2 794
DE-HAMB	2 822	8 584	8 347	8 194	8 154	7 832
DE-HESS	8 701	26 396	26 144	26 819	27 263	26 350
DE-MEVO	2 090	6 775	6 514	6 641	6 557	6 422
DE-NIED	10 359	32 480	32 363	33 633	34 188	34 035
DE-NOWE	24 477	75 065	74 135	77 163	77 283	76 823
DE-RHPF	5 242	16 386	16 094	16 952	17 036	16 717
DE-SAAR	1 201	3 556	3 518	3 707	3 690	3 792
DE-SACH	5 667	17 724	17 538	17 585	17 237	16 479
DE-SAAN	2 773	8 663	8 759	8 980	8 764	8 601
DE-SCHO	3 572	11 515	11 568	11 818	12 288	12 187
DE-THUR	2 836	8 902	8 552	8 957	8 856	8 429

M	M	M	M	M	M	M
6	7	8	9	10	11	12
351 854	361 270	361 490	368 791	378 208	394 499	396 383
48 735	50 319	50 700	51 839	52 950	55 588	56 861
55 677	56 536	57 430	58 578	60 641	62 933	64 638
14 221	14 167	13 511	13 620	13 279	13 585	13 201
9 750	10 146	10 188	9 926	9 932	10 366	10 108
2 754	2 684	2 655	2 694	2 792	2 936	2 861
7 715	7 601	7 398	7 219	7 347	7 654	7 426
27 263	27 633	27 326	28 186	28 830	29 862	30 039
6 102	6 536	6 425	6 334	6 479	6 575	6 200
34 812	36 316	36 562	38 221	39 597	41 940	42 311
78 545	80 655	81 652	83 612	86 017	90 003	90 394
17 056	17 768	17 932	18 275	19 032	20 073	20 218
3 795	3 972	3 893	4 125	4 254	4 446	4 511
16 407	16 651	16 048	15 698	15 992	16 311	15 499
8 383	8 617	8 371	8 678	8 701	8 996	8 652
12 201	12 924	12 985	13 321	13 783	14 620	15 005
8 438	8 745	8 414	8 465	8 582	8 611	8 459

M	M	M	M	M	M	M
13	14	15	16	17	18	19
404 505	417 136	410 436	398 037	403 862	417 593	424 197
58 234	60 536	59 671	59 033	59 763	61 718	62 820
66 237	67 855	67 516	66 209	67 549	70 819	70 940
13 208	13 309	12 870	12 470	12 624	12 621	13 252
9 874	9 617	9 282	8 454	8 020	7 833	8 401
3 013	3 136	3 140	2 996	3 029	3 147	3 387
7 406	7 647	7 616	7 339	7 653	7 524	7 687
30 917	32 102	31 697	30 831	31 309	31 901	32 097
6 006	6 063	5 702	5 069	4 802	5 098	5 624
43 697	45 372	44 834	43 452	44 321	45 924	45 524
93 819	97 744	96 724	94 481	97 127	100 562	101 987
21 110	22 221	21 978	21 374	22 122	23 440	23 410
4 701	5 041	5 106	4 985	5 146	5 548	5 548
14 758	14 150	13 348	12 033	11 652	11 920	12 666
8 169	8 120	7 658	7 073	6 886	6 972	7 742
15 183	16 085	15 808	15 203	15 428	15 765	15 779
8 173	8 138	7 486	7 035	6 431	6 801	7 333

M	M	M	M	M	M	M
20	21	22	23	24	25	26
444 093	492 761	489 042	506 959	501 047	493 938	479 537
64 663	68 040	66 616	68 199	66 342	65 524	63 566
73 846	77 479	75 338	78 177	76 584	76 637	73 616
14 592	18 913	20 338	22 162	23 293	24 010	24 500
9 747	14 608	15 229	15 732	15 368	14 586	14 834
3 705	4 160	4 358	4 705	4 608	4 797	4 597
8 265	9 509	9 806	10 958	11 287	11 658	11 677
32 952	34 822	34 820	35 731	35 320	35 035	34 364
6 645	10 479	11 270	11 655	11 893	11 149	11 081
46 045	47 396	45 667	46 665	45 402	44 328	41 776
104 059	107 700	104 328	107 679	106 066	104 431	100 122
24 149	25 172	24 494	25 167	24 194	23 921	22 803
5 805	6 011	5 821	5 907	5 912	5 968	5 608
15 741	24 216	26 260	27 378	28 187	27 036	27 578
9 047	14 262	14 808	15 576	15 514	14 907	14 558
16 176	16 471	15 713	16 130	15 552	14 878	14 056
8 656	13 523	14 176	15 138	15 525	15 073	14 801

M	M	M	M	M	M	M
27	28	29	30	31	32	33
481 211	485 455	499 039	494 909	495 663	474 245	469 416
63 872	63 731	65 588	65 046	65 384	61 341	60 361
74 504	75 974	77 750	78 438	77 791	74 731	73 929
25 021	25 886	27 137	26 533	26 916	25 409	24 907
14 223	14 208	14 546	14 117	14 626	14 228	14 204
4 504	4 622	4 729	4 702	4 515	4 200	4 119
12 445	12 866	13 655	13 940	14 065	13 588	13 400
34 833	35 196	36 727	36 697	36 878	35 773	35 467
10 645	10 637	10 700	10 308	10 392	10 167	10 203
41 910	42 042	42 846	42 843	42 854	41 484	41 460
100 553	101 290	104 529	103 359	103 431	98 217	97 477
22 812	22 655	23 382	23 062	22 367	21 683	21 222
5 615	5 706	5 815	5 746	5 644	5 166	5 089
26 849	27 214	27 805	26 910	27 257	26 596	26 383
14 538	14 676	14 291	14 188	14 205	13 568	13 518
14 118	14 163	14 546	14 640	14 703	14 031	14 298
14 769	14 589	14 993	14 380	14 635	14 063	13 379

M	M	M	M	M	M	M
34	35	36	37	38	39	40
466 998	458 400	447 395	453 960	459 828	502 832	558 122
60 164	60 922	59 317	60 949	61 059	66 688	73 038
74 211	73 647	72 186	73 765	74 070	80 700	88 100
24 063	22 968	22 181	21 556	20 728	21 734	24 224
13 875	12 749	12 219	12 141	12 449	14 363	16 883
3 954	3 986	3 877	3 864	3 895	4 090	4 389
13 293	12 935	12 370	12 289	11 587	12 362	13 234
35 013	35 393	34 842	35 552	36 005	38 556	42 333
9 839	8 538	8 143	7 918	8 196	8 977	10 461
41 442	41 829	41 412	42 551	43 742	48 498	53 331
98 677	98 926	96 634	97 969	100 147	109 296	120 316
21 024	20 954	20 694	20 886	21 674	23 568	26 323
5 092	4 984	4 889	4 980	4 977	5 479	6 110
25 906	22 836	21 889	21 824	22 119	24 400	28 552
12 974	11 595	11 086	11 217	11 902	13 567	16 284
14 379	14 474	14 292	14 738	15 241	16 754	19 114
13 092	11 664	11 364	11 761	12 037	13 800	15 430

M	M	M	M	M	M	M
41	42	43	44	45	46	47
580 360	628 836	660 694	680 674	703 083	708 697	722 461
75 793	82 228	86 482	89 194	91 778	92 024	93 967
91 988	100 934	105 719	108 423	110 187	110 349	111 429
24 551	25 652	26 968	27 249	28 198	29 482	29 689
17 079	17 923	18 897	20 262	21 751	23 164	24 334
4 589	4 941	5 251	5 340	5 647	5 516	5 510
13 368	14 172	15 082	15 253	15 223	14 796	15 017
44 501	48 462	51 087	51 938	53 574	53 727	54 363
10 533	11 018	11 596	12 131	13 271	14 213	14 971
56 650	62 123	65 901	67 910	69 849	69 650	69 797
126 849	140 258	147 205	151 847	156 406	156 238	158 845
27 750	30 491	32 567	33 348	35 272	35 306	36 381
6 425	7 173	7 721	8 100	8 487	8 502	8 839
28 362	28 350	28 901	29 963	31 373	32 889	33 972
16 043	16 679	17 226	17 885	18 711	19 495	20 301
20 308	22 747	24 302	25 529	25 718	25 265	25 856
15 571	15 685	15 789	16 302	17 638	18 081	19 190

M	M	M	M	M	M	M
48	49	50	51	52	53	54
717 327	693 307	682 236	659 294	642 400	606 687	592 496
92 982	89 807	87 610	84 826	81 641	77 825	75 669
109 953	106 533	105 194	100 892	98 079	93 054	90 070
29 718	28 274	26 645	25 936	24 723	22 624	21 620
25 011	25 060	24 774	23 729	23 448	21 460	21 046
5 253	5 156	5 001	4 846	4 669	4 501	4 488
14 274	13 162	12 647	12 440	11 786	11 101	10 604
53 344	51 214	49 677	48 089	46 826	44 492	43 419
15 706	15 641	15 953	15 471	15 115	14 305	14 041
69 159	66 618	66 072	63 264	61 669	58 060	56 765
155 796	149 239	146 089	142 805	139 417	132 749	130 046
36 640	35 294	35 287	33 853	33 228	31 343	31 237
8 955	8 966	9 269	8 759	9 102	8 676	8 420
34 738	34 229	33 763	32 593	32 160	29 626	29 522
21 243	20 749	20 959	20 418	19 763	18 688	18 302
24 941	23 927	23 261	22 179	21 581	20 386	19 490
19 614	19 438	20 035	19 194	19 193	17 797	17 757

M	M	M	M	M	M	M
55	56	57	58	59	60	61
574 895	554 441	539 839	520 422	519 367	508 673	507 671
73 446	69 252	66 325	63 243	63 729	61 860	61 782
86 782	81 459	79 003	75 613	75 741	73 594	74 449
21 047	20 601	20 100	19 801	19 038	19 454	19 981
20 887	21 039	20 378	20 028	19 497	19 130	17 770
4 257	4 126	4 016	3 846	3 840	3 903	3 880
10 051	9 637	9 263	8 778	8 924	8 722	8 964
41 761	39 801	38 799	36 877	37 230	36 550	37 545
13 882	13 991	14 019	13 673	13 112	12 722	11 919
54 666	52 624	50 903	49 174	49 768	49 355	49 796
125 068	119 120	116 248	110 192	109 087	105 347	105 488
29 849	28 809	28 375	27 415	27 482	26 844	27 265
8 010	7 642	7 678	7 470	7 426	7 110	7 328
30 077	30 933	30 331	30 544	31 276	31 667	30 345
18 277	19 180	18 840	18 584	18 522	17 478	17 321
18 726	18 141	17 813	17 406	17 107	17 401	17 451
18 109	18 086	17 748	17 778	17 588	17 536	16 387

M	M	M	M	M	M	M
62	63	64	65	66	67	68
492 179	450 195	419 769	364 453	315 277	420 585	424 783
61 341	57 337	52 962	46 107	39 203	51 077	50 817
73 016	69 911	68 461	59 969	48 172	62 476	62 184
19 012	17 482	16 296	13 051	14 340	18 804	19 739
15 095	13 040	12 224	8 207	9 484	14 339	15 494
3 961	3 743	3 477	3 472	2 786	3 497	3 687
9 077	8 890	8 562	7 965	6 894	8 705	8 801
37 560	35 539	32 957	28 313	23 309	31 057	30 858
10 144	8 852	8 170	5 423	5 680	8 523	9 165
49 481	45 758	41 467	38 608	30 453	40 173	41 916
105 601	96 651	88 675	80 729	66 881	87 104	87 010
26 366	22 772	20 106	17 941	14 729	19 389	19 272
7 504	6 444	5 158	4 147	3 833	5 120	4 972
26 546	21 121	20 726	15 705	18 237	26 626	26 068
15 182	12 875	12 457	10 136	10 073	14 088	14 512
17 544	17 150	16 053	15 019	12 111	16 379	17 006
14 749	12 630	12 018	9 661	9 092	13 228	13 282

M	M	M	M	M	M	M
69	70	71	72	73	74	75
407 950	487 840	504 651	487 820	445 239	404 787	379 123
50 471	59 028	61 340	59 814	54 639	50 321	47 417
59 810	71 524	74 966	73 125	65 086	57 785	53 429
18 653	21 270	20 041	18 235	16 585	15 092	14 137
14 769	18 341	17 988	17 208	15 542	14 166	13 414
3 487	3 938	4 155	3 802	3 637	3 293	3 161
8 489	9 688	9 484	8 918	8 328	7 916	7 232
28 937	34 594	36 324	34 825	31 347	28 680	27 187
8 795	11 226	11 127	10 888	10 180	9 002	8 319
40 556	48 555	49 858	48 302	45 241	40 947	37 676
84 034	98 978	105 185	102 017	94 887	87 259	82 099
18 751	22 841	24 321	23 967	22 068	20 256	19 253
4 816	6 093	6 316	6 287	5 808	5 556	5 440
23 806	29 459	30 047	28 905	26 062	23 267	22 085
14 072	17 267	17 541	16 661	14 571	13 368	12 415
16 278	19 574	19 620	18 994	17 594	15 815	14 454
12 226	15 464	16 338	15 872	13 664	12 064	11 405

M	M	M	M	M	M	M
76	77	78	79	80	81	82
353 349	314 736	241 201	227 162	217 090	212 697	191 701
44 155	38 663	31 407	29 388	28 032	27 272	24 601
49 135	43 894	35 604	33 860	31 840	31 029	28 156
13 344	11 858	8 091	7 234	7 100	6 866	6 089
12 717	11 284	8 134	7 713	7 253	6 930	5 974
2 754	2 429	1 811	1 630	1 577	1 585	1 519
6 766	5 597	4 222	3 834	3 703	3 708	3 469
24 962	22 430	17 361	16 074	15 537	15 285	14 328
7 983	7 232	5 531	5 324	4 877	4 466	3 840
34 915	30 764	22 816	21 506	21 088	20 510	18 540
77 011	69 944	52 768	50 490	48 272	48 223	43 259
17 844	15 976	12 444	11 823	11 309	11 132	10 073
4 872	4 088	3 507	3 322	3 171	3 089	2 671
21 673	19 093	14 254	13 191	12 826	12 868	11 665
11 540	10 356	7 859	7 492	7 105	6 639	5 793
13 141	11 605	8 247	7 437	7 119	6 871	6 350
10 537	9 523	7 145	6 844	6 281	6 224	5 374

M	M	M	M	M	M	M
83	84	85	86	87	88	89
173 985	143 081	119 846	100 722	76 135	63 163	55 472
22 139	18 380	15 802	13 428	9 918	8 421	7 340
25 885	21 847	18 369	15 471	11 569	9 957	8 711
5 328	4 237	3 575	2 934	2 198	1 638	1 550
5 051	3 901	3 051	2 593	1 904	1 491	1 250
1 394	1 158	985	823	649	557	532
3 245	2 641	2 303	2 025	1 537	1 359	1 255
13 245	10 964	9 565	8 135	6 199	5 000	4 432
3 176	2 345	1 889	1 546	1 170	921	790
17 180	14 697	12 181	10 407	7 908	6 545	5 587
39 305	32 342	26 753	21 979	16 933	13 658	12 038
9 437	7 850	6 569	5 472	4 020	3 427	2 989
2 372	1 998	1 703	1 325	1 121	950	738
10 143	7 936	6 588	5 508	4 121	3 462	3 216
5 208	4 109	3 332	2 780	2 112	1 660	1 577
5 971	4 774	3 996	3 589	2 794	2 410	2 000
4 906	3 902	3 185	2 707	1 982	1 707	1 467

M	M	M	M	M	M	M
90	91	92	93	94	95	96
46 192	36 063	21 521	10 338	7 286	5 857	5 232
6 068	4 841	2 966	1 434	946	798	739
7 405	5 675	3 591	1 663	1 208	985	806
1 416	1 258	739	359	273	236	201
1 171	874	484	209	158	115	130
449	346	240	120	74	50	54
1 004	825	531	283	171	117	137
3 697	2 927	1 742	829	600	498	419
653	483	313	122	99	69	64
4 778	3 815	2 158	1 083	761	599	520
9 506	7 203	4 352	2 124	1 550	1 246	1 060
2 339	1 788	1 070	554	393	302	265
586	418	232	143	93	72	61
2 836	2 227	1 250	561	344	288	283
1 312	1 015	531	227	156	121	134
1 778	1 388	802	392	306	238	218
1 194	980	520	235	154	123	141

M	M	M	M
97	98	99	100
4 581	3 037	1 863	2 500
650	439	256	301
704	459	309	372
174	126	102	201
119	74	54	67
46	41	22	34
123	67	45	80
366	241	138	197
53	37	32	40
533	294	158	260
907	647	344	452
256	141	94	110
32	42	25	31
243	156	123	129
107	68	52	73
162	141	68	100
106	64	41	53

	F	F	F	F	F	F
	0	1	2	3	4	5
DE	106 894	329 962	324 763	335 053	334 702	328 477
DE-BAWU	14 389	44 396	44 186	45 499	46 234	45 621
DE-BAYE	16 791	51 679	50 652	52 309	52 830	51 655
DE-BERL	5 235	16 060	15 571	15 205	14 750	14 202
DE-BRAN	2 980	9 218	9 284	9 725	9 542	9 221
DE-BREM	827	2 681	2 613	2 688	2 710	2 543
DE-HAMB	2 704	8 054	7 703	7 774	7 583	7 255
DE-HESS	8 254	25 414	24 800	25 666	25 661	25 270
DE-MEVO	2 014	6 484	6 488	6 438	6 216	6 072
DE-NIED	9 971	30 700	30 452	32 011	32 152	32 026
DE-NOWE	23 086	71 193	70 552	73 002	73 303	72 878
DE-RHPF	5 057	15 444	15 201	15 920	15 978	15 599
DE-SAAR	1 149	3 493	3 431	3 481	3 509	3 401
DE-SACH	5 513	17 070	16 421	16 789	16 306	15 713
DE-SAAN	2 699	8 411	8 246	8 562	8 348	7 841
DE-SCHO	3 503	11 091	10 806	11 477	11 423	11 386
DE-THUR	2 722	8 574	8 357	8 507	8 157	7 794

F	F	F	F	F	F	F
6	7	8	9	10	11	12
334 129	343 140	343 458	349 730	357 903	374 982	375 595
46 586	47 463	47 513	48 780	50 069	52 919	53 371
52 556	54 610	55 106	56 060	56 860	60 084	60 696
13 428	13 518	12 913	12 748	12 904	13 035	12 727
9 361	9 510	9 460	9 443	9 329	9 985	9 705
2 457	2 476	2 560	2 500	2 662	2 749	2 838
7 340	7 159	6 992	6 884	6 996	7 096	6 931
25 888	26 238	26 231	26 457	27 046	28 466	28 373
6 010	6 271	6 099	5 935	6 132	6 156	5 894
33 092	34 824	35 035	36 280	37 869	39 625	40 102
73 998	76 524	77 123	79 231	81 382	85 344	86 247
16 185	16 487	16 968	17 367	17 903	19 100	19 478
3 649	3 662	3 666	3 834	3 980	4 205	4 485
15 732	15 963	15 473	15 293	15 058	15 583	14 699
8 198	8 016	7 822	8 060	8 204	8 329	7 979
11 651	12 193	12 369	12 787	13 271	14 074	14 295
7 998	8 226	8 128	8 071	8 238	8 232	7 775

F	F	F	F	F	F	F
13	14	15	16	17	18	19
384 752	397 086	389 525	377 973	383 115	396 698	405 231
55 248	57 627	56 805	55 738	56 411	58 506	59 053
62 813	64 860	64 020	62 802	63 875	67 053	68 344
12 750	12 683	12 489	12 038	11 862	12 186	12 794
9 382	9 264	8 612	7 915	7 588	7 356	7 753
2 820	2 888	2 857	2 930	2 861	2 996	3 187
7 088	7 204	7 121	6 789	7 157	7 351	7 612
29 225	30 365	29 949	29 130	29 832	30 623	30 794
5 838	5 681	5 321	4 842	4 500	4 566	5 225
41 677	43 561	42 350	41 559	42 357	43 596	43 657
88 795	92 824	92 117	90 051	92 370	96 183	97 423
20 328	21 150	20 647	20 472	21 029	21 852	22 617
4 422	4 861	4 891	4 730	5 040	5 164	5 335
14 059	13 706	12 806	11 501	11 010	11 244	12 019
7 890	7 633	7 277	6 626	6 571	6 699	7 267
14 596	14 981	15 032	14 408	14 473	14 940	15 110
7 821	7 798	7 231	6 442	6 179	6 383	7 041

F	F	F	F	F	F	F
20	21	22	23	24	25	26
424 827	472 157	470 880	486 991	481 349	479 446	466 597
61 750	65 064	63 492	65 478	63 346	63 807	61 847
69 637	74 467	73 394	75 413	73 677	75 020	72 900
14 820	19 820	21 817	23 735	25 088	25 870	26 228
9 131	13 040	13 459	13 626	13 588	12 938	12 644
3 674	4 217	4 558	4 897	4 730	4 628	4 440
8 469	10 132	10 813	11 982	12 360	12 777	13 341
32 134	34 032	34 248	35 376	34 877	35 127	34 187
6 237	9 807	10 042	10 184	10 433	9 727	9 598
43 408	44 160	42 699	43 761	42 756	41 867	40 837
100 348	103 852	101 876	104 986	103 411	103 293	99 789
23 001	23 876	23 497	24 213	23 633	23 273	21 814
5 416	5 619	5 507	5 648	5 665	5 664	5 293
14 890	22 855	24 030	24 781	25 449	24 732	24 357
8 512	12 925	13 395	13 851	13 806	12 973	12 617
15 253	15 672	15 019	15 325	14 870	14 817	14 084
8 147	12 619	13 034	13 735	13 660	12 933	12 621

F	F	F	F	F	F	F
27	28	29	30	31	32	33
468 589	474 752	488 619	490 357	493 157	471 325	466 202
62 283	63 228	64 931	65 549	65 798	62 580	60 734
73 815	75 015	78 275	78 974	78 820	75 517	74 996
26 468	26 812	27 257	27 450	26 844	25 207	23 825
12 398	12 567	12 672	12 915	13 451	13 190	13 525
4 524	4 671	4 636	4 389	4 232	3 938	3 859
13 590	14 273	14 878	15 245	14 896	13 886	13 247
35 228	35 545	37 410	37 896	38 188	36 936	36 728
9 299	9 272	9 294	8 896	9 244	8 736	8 847
40 183	41 106	42 558	42 924	43 602	41 958	41 847
100 042	101 302	104 306	104 780	105 212	100 645	99 906
22 066	21 875	22 708	22 907	22 844	21 733	21 534
5 341	5 387	5 514	5 460	5 499	5 294	5 235
24 252	24 368	24 424	23 548	24 387	23 125	23 460
12 552	12 451	12 144	11 976	12 204	11 649	11 832
14 038	14 334	15 011	15 129	15 477	14 908	14 981
12 510	12 546	12 601	12 319	12 459	12 023	11 646

F	F	F	F	F	F	F
34	35	36	37	38	39	40
462 943	456 703	443 996	453 054	458 567	498 778	550 358
61 066	61 061	60 273	62 194	62 194	67 566	72 726
74 337	74 207	73 022	74 680	74 600	81 235	87 996
23 172	22 378	21 123	20 492	20 095	20 765	22 755
13 206	12 073	11 643	11 762	12 132	13 462	16 039
3 903	3 788	3 725	3 620	3 731	3 987	4 247
12 873	12 854	11 954	11 704	11 670	11 928	12 592
36 602	36 680	35 451	36 090	36 517	39 257	42 638
8 596	7 485	7 091	7 006	7 298	8 166	9 435
41 806	42 554	41 459	43 498	44 671	48 839	54 186
99 748	101 026	98 537	100 723	101 978	110 625	121 616
21 673	21 217	21 146	21 599	22 173	24 360	26 696
5 271	4 983	4 799	5 022	5 073	5 586	6 335
22 755	20 529	19 415	19 104	19 413	21 393	25 189
11 373	10 181	9 653	10 142	10 493	12 294	14 551
15 057	15 364	14 961	15 263	15 945	17 515	19 810
11 505	10 323	9 744	10 155	10 584	11 800	13 547

F	F	F	F	F	F	F
41	42	43	44	45	46	47
572 371	615 100	645 629	665 376	685 401	687 637	702 970
76 071	81 347	85 639	87 199	89 742	89 145	90 887
91 606	98 465	102 707	105 846	107 284	106 019	108 436
23 162	24 215	25 562	25 751	27 197	27 887	28 554
16 594	17 596	18 719	19 894	21 472	22 351	23 290
4 311	4 670	5 051	5 038	5 181	5 229	5 168
12 781	13 314	14 179	14 410	14 623	14 152	14 319
44 295	47 654	49 772	50 988	52 073	52 198	52 663
9 859	10 243	11 115	11 845	12 809	13 582	14 314
57 032	61 765	64 763	67 343	68 500	67 713	68 637
126 936	139 144	145 890	149 666	153 477	152 940	155 171
28 064	30 401	32 154	33 386	34 425	34 726	35 539
6 442	7 332	7 807	8 082	8 437	8 833	9 091
25 491	25 889	26 669	27 731	29 828	31 057	32 910
15 003	15 635	16 105	17 059	17 799	18 774	19 839
20 612	22 995	24 602	25 485	25 798	25 499	25 635
14 112	14 435	14 895	15 653	16 756	17 532	18 517

F	F	F	F	F	F	F
48	49	50	51	52	53	54
698 718	679 609	673 121	651 568	634 782	600 614	589 145
89 796	87 271	86 619	84 428	80 907	77 026	75 121
107 676	104 755	103 392	99 262	96 085	91 669	89 402
28 462	27 150	25 987	24 539	23 839	22 058	21 316
24 317	24 052	23 864	23 154	22 442	20 682	20 113
5 220	5 161	4 895	4 835	4 821	4 644	4 609
13 879	13 103	12 608	12 169	11 660	11 191	10 750
51 974	50 099	49 270	47 526	46 353	44 039	43 129
14 946	15 046	15 234	14 996	14 750	13 831	13 453
67 642	65 868	64 981	62 472	60 816	57 210	56 645
152 552	147 058	145 834	142 651	139 654	132 609	129 826
35 492	34 964	34 873	34 068	32 660	31 184	30 771
9 010	8 971	8 964	8 811	8 751	8 543	8 173
33 168	32 712	33 094	31 731	31 762	29 569	29 574
20 456	20 479	20 366	19 855	19 670	18 428	18 407
25 029	23 959	23 522	22 382	21 877	20 441	20 338
19 099	18 961	19 618	18 689	18 735	17 490	17 518

F	F	F	F	F	F	F
55	56	57	58	59	60	61
575 335	561 503	555 941	540 740	540 880	530 615	530 737
73 786	70 462	69 350	66 997	66 927	65 004	65 982
85 946	82 274	81 117	78 603	79 374	76 995	77 731
21 100	21 147	21 201	20 980	21 108	21 490	22 503
20 134	20 295	20 340	20 078	19 682	18 866	18 026
4 457	4 383	4 242	4 122	4 218	4 159	4 119
10 376	9 838	9 757	9 347	9 520	9 499	9 835
41 919	40 496	40 022	38 714	39 137	38 618	39 411
13 744	13 849	13 772	13 600	13 325	12 856	11 925
54 291	52 519	52 173	50 459	50 803	50 142	50 224
125 843	122 457	120 934	115 963	115 252	111 631	111 270
29 730	28 985	28 569	27 858	27 555	27 034	27 342
8 006	7 656	7 788	7 616	7 370	7 291	7 328
30 070	31 316	31 322	31 665	31 984	33 178	31 808
18 911	18 998	18 714	19 092	19 002	18 317	17 950
19 111	18 647	18 667	17 821	17 932	17 875	18 228
17 911	18 181	17 973	17 825	17 691	17 660	17 055

F	F	F	F	F	F	F
62	63	64	65	66	67	68
512 252	467 198	440 622	385 290	341 642	454 361	459 807
64 201	58 758	54 980	48 287	41 928	54 396	55 602
75 987	72 375	70 711	63 209	50 983	65 635	65 776
20 829	18 968	17 797	13 506	15 781	20 683	21 680
15 316	13 244	12 892	8 741	10 610	15 822	16 845
4 202	3 847	3 818	3 701	3 009	3 712	3 804
9 747	9 402	8 925	8 381	7 543	9 491	9 489
39 180	36 664	34 532	29 564	24 750	32 943	32 499
10 376	9 072	8 548	5 577	6 244	9 337	10 280
49 842	46 124	42 687	40 209	31 713	43 113	43 894
110 988	101 914	94 012	86 861	74 139	95 461	95 695
26 777	22 973	20 596	18 412	15 720	20 610	20 450
7 462	6 500	5 335	4 438	4 081	5 589	5 465
27 972	22 546	22 989	17 081	20 611	29 902	29 646
16 275	13 741	13 498	10 912	11 202	15 741	16 182
18 084	17 882	16 751	15 810	13 354	17 433	17 938
15 014	13 188	12 551	10 601	9 974	14 493	14 562

F	F	F	F	F	F	F
69	70	71	72	73	74	75
445 863	543 784	572 665	563 023	521 086	484 018	465 872
53 933	65 972	69 180	68 230	63 790	58 705	56 467
64 087	78 708	84 122	82 964	74 904	68 507	65 587
20 600	23 957	23 021	21 707	20 022	19 198	18 032
16 517	20 462	20 743	20 222	18 724	17 052	16 625
3 891	4 405	4 513	4 494	4 355	4 116	3 962
9 221	10 510	10 954	10 713	10 074	9 311	9 089
30 972	37 389	40 301	39 256	35 844	33 457	32 173
10 057	12 856	13 214	13 517	12 451	11 453	11 291
42 772	52 471	54 802	54 077	51 367	47 057	45 005
93 059	111 748	120 711	119 013	111 932	105 840	101 274
19 992	25 235	27 670	26 892	25 126	23 598	22 938
5 452	6 974	7 360	7 624	6 978	7 077	6 994
27 741	34 552	35 408	34 830	31 638	28 957	28 492
16 315	19 773	20 323	19 873	18 101	16 821	16 400
17 337	20 847	20 916	20 902	19 459	17 673	16 770
13 917	17 925	19 427	18 709	16 321	15 196	14 773

F	F	F	F	F	F	F
76	77	78	79	80	81	82
444 763	406 639	322 493	315 413	314 270	322 605	303 472
53 307	48 065	39 817	38 607	38 589	39 165	36 860
61 790	56 613	47 258	46 962	45 800	46 322	43 598
17 423	16 047	11 396	10 488	10 389	10 708	10 177
16 051	14 547	11 227	10 794	10 466	10 693	9 756
3 754	3 427	2 580	2 660	2 577	2 647	2 532
8 944	7 826	5 921	5 677	5 874	6 092	5 785
30 668	28 060	22 240	21 749	21 598	22 822	21 399
10 709	9 918	7 893	7 724	7 293	7 270	6 629
42 655	38 969	30 578	30 263	30 305	31 156	29 127
97 563	90 500	70 737	69 399	69 729	71 692	67 582
21 914	19 901	16 076	15 678	16 025	16 432	15 556
6 200	5 399	4 516	4 631	4 619	4 422	4 260
27 773	25 639	19 956	19 275	19 752	20 918	20 017
15 825	14 581	11 580	11 256	11 091	11 470	10 705
15 958	14 120	10 584	10 193	10 256	10 327	9 831
14 229	13 027	10 134	10 057	9 907	10 469	9 658

F	F	F	F	F	F	F
83	84	85	86	87	88	89
287 536	260 815	248 166	233 881	204 278	180 668	163 700
35 205	31 787	30 332	28 842	25 047	22 886	20 391
41 270	37 922	36 698	34 937	30 550	27 723	24 816
9 420	8 425	8 354	7 739	6 678	5 593	5 496
9 075	7 718	7 257	6 570	5 612	4 721	4 504
2 481	2 260	2 165	1 993	1 749	1 676	1 441
5 714	5 181	4 959	4 801	4 312	3 759	3 390
20 018	18 658	18 095	17 091	15 205	13 604	12 120
6 102	5 356	4 843	4 334	3 654	3 154	2 782
28 063	25 876	24 179	23 594	20 412	18 007	16 616
63 998	58 460	54 671	51 672	45 664	39 266	35 365
14 761	13 525	13 062	12 168	10 801	9 402	8 569
4 045	3 720	3 400	3 212	2 988	2 749	2 291
18 483	16 349	16 044	14 418	12 144	10 969	10 296
10 142	8 755	8 073	7 487	6 394	5 606	5 118
9 538	8 715	8 268	8 136	7 026	6 388	5 841
9 221	8 108	7 766	6 887	6 042	5 165	4 664

F	F	F	F	F	F	F
90	91	92	93	94	95	96
147 537	122 230	76 985	39 304	29 769	25 267	24 861
18 633	15 697	9 803	4 998	3 780	3 178	3 111
22 028	18 347	11 621	5 968	4 512	3 709	3 486
5 277	4 692	3 189	1 752	1 259	1 139	1 169
4 055	3 349	2 117	1 017	762	669	699
1 436	1 143	783	410	285	228	238
3 259	2 798	1 808	906	712	655	624
11 068	9 208	5 792	2 879	2 240	1 825	1 846
2 579	2 092	1 245	614	506	390	386
14 663	12 167	7 824	3 978	3 028	2 633	2 593
31 102	25 086	16 423	8 680	6 544	5 676	5 438
7 438	5 907	3 680	1 959	1 478	1 252	1 240
1 898	1 396	886	509	376	310	302
9 819	8 473	4 756	2 152	1 563	1 378	1 561
4 569	3 863	2 278	1 075	847	656	605
5 384	4 582	2 824	1 511	1 162	980	995
4 329	3 430	1 956	896	715	589	568

F	F	F	F
97	98	99	100
23 471	16 321	10 936	16 652
2 992	2 030	1 345	1 993
3 275	2 223	1 494	2 152
1 147	856	627	1 227
625	477	314	485
245	171	115	210
554	395	278	441
1 748	1 189	837	1 245
375	309	187	254
2 360	1 669	1 068	1 672
5 224	3 534	2 356	3 569
1 135	801	503	769
270	205	127	189
1 439	1 036	701	1 024
615	404	277	421
913	630	468	651
554	392	239	350

Table 6: Smoking prevalence by age, sex and smoking status, Men

Age	Current	Former	Never Smoker
35-39	0.42	0.25	0.33
40-44	0.40	0.27	0.33
45-49	0.39	0.33	0.28
50-54	0.28	0.35	0.37
55-59	0.24	0.35	0.41
60-64	0.21	0.42	0.37
65-69	0.14	0.42	0.44
70-74	0.12	0.52	0.36
75-79	0.12	0.51	0.37
80-84	0.12	0.51	0.37
85+	0.12	0.51	0.37

Table 7: Smoking prevalence by age, sex and smoking status, Women

Age	Current	Former	Never Smoker
35-39	0.38	0.23	0.39
40-44	0.35	0.25	0.40
45-49	0.37	0.26	0.37
50-54	0.31	0.27	0.42
55-59	0.23	0.28	0.49
60-64	0.17	0.21	0.62
65-69	0.11	0.17	0.72
70-74	0.06	0.22	0.72
75-79	0.06	0.22	0.72
80-84	0.06	0.22	0.72
85+	0.06	0.22	0.72

Table 8: Population by age and sex, Federal Statistical Office 2013

Age	Male	Female
35-39	2337312	2309413
40-44	2862980	2812768
45-49	3521999	3424946
50-54	3327019	3288642
55-59	2788019	2838820
60-64	2444725	2579561
65-69	1880091	2037956
70-74	2201312	2538985

75-79	1647187	2112831
80-84	903733	1408200
85+	564350	1463032

Table 9: Numbers of deaths by age and sex, Men

Age	Numbers
35-39	2235
40-44	4334
45-49	9403
50-54	15826
55-59	22125
60-64	29847
65-69	34297
70-74	60178
75-79	73272
80-84	74702
85+	96748

Table 10: Numbers of deaths age and sex, Women

Age	Numbers
35-39	1229
40-44	2477
45-49	5147
50-54	8574
55-59	11695
60-64	16266
65-69	19864
70-74	37390
75-79	56453
80-84	78784
85+	222621

Table 11: Relative Mortality Risks from Surgeon General's Report 2014, Men

Age	Never	Former	Current
35-39	1.0	1.3	2.6
40-44	1.0	1.3	2.6
45-49	1.0	1.3	2.6

50-54	1.0	1.3	2.6
55-59	1.0	1.5	3.0
60-64	1.0	1.5	3.0
65-69	1.0	1.6	3.0
70-74	1.0	1.6	3.0
75-79	1.0	1.4	2.4
80-85	1.0	1.4	2.4
85+	1.0	1.4	2.4

Table 12: Relative Mortality Risks from Surgeon General's Report 2014, Women

Age	Never	Former	Current
35-39	1.0	1.2	1.8
40-44	1.0	1.2	1.8
45-49	1.0	1.2	1.8
50-54	1.0	1.2	1.8
55-59	1.0	1.3	2.6
60-64	1.0	1.3	2.6
65-69	1.0	1.5	2.9
70-74	1.0	1.5	2.9
75-79	1.0	1.4	2.5
80-85	1.0	1.4	2.5
85+	1.0	1.4	2.5

Table 13: Death rates by age and sex, stratified by smoking status, Men (not per 1000 population, to be multiplied by 1000 if needed)

Age	Never	Former	Current
35-39	0.00055	0.00073	0.00141
40-44	0.00089	0.00118	0.00226
45-49	0.00156	0.00207	0.00397
50-54	0.00307	0.00408	0.00783
55-59	0.00485	0.00712	0.01440
60-64	0.00758	0.01114	0.02251
65-69	0.01198	0.01882	0.03619
70-74	0.01777	0.02789	0.05365
75-79	0.03230	0.04555	0.07752
80-85	0.06002	0.08463	0.14406
85+	0.12449	0.17553	0.29877

Table 14: Death rates by age and sex, stratified by smoking status, Women (not per 1000 population, to be multiplied by 1000 if needed)

Age	Never	Former	Current
35-39	0.00039	0.00048	0.00071
40-44	0.00066	0.00081	0.00118
45-49	0.00111	0.00136	0.00199
50-54	0.00200	0.00244	0.00358
55-59	0.00280	0.00376	0.00737
60-64	0.00468	0.00627	0.01230
65-69	0.00752	0.01151	0.02159
70-74	0.01198	0.01834	0.03440
75-79	0.02259	0.03230	0.05580
80-85	0.04730	0.06764	0.11683
85+	0.12865	0.18397	0.31776

Table 15: Prevalence of smoking for men and women in Germany, GEDA 2012

Lower age	Upper age	Male current smoker	Female current smoker	Male former smoker	Female former smoker	Male never smoker	Female never smoker
18	29	0,386	0,302	0,107	0,113	0,507	0,585
30	44	0,391	0,314	0,226	0,206	0,382	0,479
45	64	0,328	0,276	0,347	0,259	0,325	0,465
65	100	0,146	0,094	0,458	0,186	0,396	0,720
All	All	0,314	0,239	0,299	0,205	0,387	0,556

Table 16: The relative risks for smoking related diseases, part1

Disease	Sex	Age	Smoking Status	RR
Lung Cancer	Male	35-54	Current	14,33
Lung Cancer	Male	35-54	Former	4,4
Lung Cancer	Female	35-54	Current	13,3
Lung Cancer	Female	35-54	Former	2,64
COPD	Male	35-54	Current	1
COPD	Male	35-54	Former	1
COPD	Female	35-54	Current	1
COPD	Female	35-54	Former	1
CHD	Male	35-54	Current	3,88
CHD	Male	35-54	Former	1,83
CHD	Female	35-54	Current	4,98
CHD	Female	35-54	Former	2,23
Stroke	Male	35-54	Current	1
Stroke	Male	35-54	Former	1
Stroke	Female	35-54	Current	1
Stroke	Female	35-54	Former	1

Table 17: Relative risks in smokers and former smokers for smoking related diseases, women

Disease	RR female age-adjusted (CI), multivariable adjusted (CI)		
	Current Smokers CPS I	Current Smokers CPS II	Current Smokers Contemporary cohort
All causes	1.33 (1.28-1.38), 1.35 (1.30-1.40)	2.08 (2.03-2.14), 2.08 (2.02-2.14)	2.80 (2.73-2.88), 2.76 (2.69-2.84)
Lung cancer	2.74 (2.07-3.62), 2.73 (2.07-3.61)	12.62 (11.13-14.31), 12.65 (1.15-14.34)	26.18 (23.65-28.98), 25.66 (23.17-28.40)
COPD	3.93 (2.88-5.38), 3.95 (2.89-5.41)	10.31 (8.60-12.36), 10.35 (8.63-12.41)	23.03 (20.15-26.31), 22.35 (19.55-25.55)
Ischemic heart disease	1.53 (1.43-1.64), 1.56 (1.46-1.67)	2.00 (1.87-2.13), 2.00 (1.88-2.13)	2.93 (2.72-3.16), 2.86 (2.65-3.08)
Other heart disease	1.16 (1.01-1.33), 1.20 (1.04-1.37)	1.89 (1.72-2.08), 1.88 (1.71-2.07)	1.89 (1.69-2.11), 1.84 (1.65-2.06)
Any stroke	1.48 (1.33-1.65), 1.51 (1.35-1.69)	2.20 (1.97-2.45), 2.19 (1.96-2.44)	2.12 (1.89-2.38), 2.10 (1.87-2.36)

Former Smokers CPS I	Former Smokers CPS II	Former Smokers Contemporary cohort
1.29 (1.20-1.39), 1.33 (1.23-1.43)	1.28 (1.24-1.32), 1.33 (1.29-1.37)	1.44 (1.41-1.46), 1.45 (1.43- 1.48)
1.30 (0.64-2.65), 1.30 (0.64-2.64)	3.77 (3.25-4.38), 3.85 (3.32-4.47)	6.66 (6.06-7.31), 6.70 (6.09- 7.36)
2.32 (1.18-4.56), 2.31 (1.17-4.56)	5.84 (4.83-7.05), 6.10 (5.05-7.37)	7.88 (7.00-8.87), 8.09 (7.19- 9.10)
1.35 (1.19-1.55), 1.39 (1.22-1.59)	1.20 (1.12-1.28), 1.27 (1.19-1.36)	1.40 (1.34-1.47), 1.44 (1.38- 1.51)
1.35 (1.07-1.70), 1.40 (1.11-1.77)	1.15 (1.04-1.28), 1.22 (1.10-1.35)	1.21 (1.14-1.29), 1.24 (1.17- 1.32)
1.42 (1.16-1.73), 1.46 (1.19-1.78)	1.12 (0.99-1.27), 1.16 (1.03-1.31)	1.14 (1.07-1.21), 1.15 (1.07- 1.22)

Table 18: Relative risks in smokers and former smokers for smoking related diseases, men

Disease	RR male age-adjusted (CI), multivariable adjusted (CI)		
	Current Smokers CPS I	Current Smokers CPS II	Current Smokers Contemporary cohort
All causes	1.78 (1.73-1.84), 1.76	2.43 (2.36-2.50), 2.33	2.98 (2.90-3.07), 2.80

	(1.71-1.81)	(2.26-2.40)	(2.72-2.88)
Lung cancer	12.49 (9.80-15.92), 12.22 (9.59-15.58)	25.30 (21.10-30.34), 23.81 (19.85-28.57)	27.32 (24.30-30.70), 24.97 (22.20-28.09)
COPD	5.61 (4.38-7.20), 5.52 (4.30-7.08)	10.50 (8.39-13.13), 9.98 (7.97-12.49)	28.97 (24.55-34.19), 25.61 (21.68-30.25)
Ischemic heart disease	1.71 (1.63-1.79), 1.69 (1.61-1.77)	1.86 (1.76-1.96), 1.78 (1.69-1.88)	2.69 (2.53-2.88), 2.50 (2.34-2.66)
Other heart disease	1.55 (1.37-1.74), 1.51 (1.34-1.70)	1.99 (1.81-2.18), 1.88 (1.71-2.07)	2.35 (2.10-2.63), 2.15 (1.92-2.41)
Any stroke	1.41 (1.28-1.55), 1.38 (1.26-1.52)	2.08 (1.84-2.35), 1.97 (1.74-2.23)	2.00 (1.73-2.31), 1.92 (1.66-2.21)

Former Smokers CPS I	Former Smokers CPS II	Former Smokers Contemporary cohort
1.28 (1.23-1.33), 1.28 (1.23-1.34)	1.43 (1.40-1.47), 1.42 (1.38-1.45)	1.53 (1.50-1.55), 1.47 (1.45- 1.50)
3.50 (2.58-4.76), 3.48 (2.56-4.74)	7.60 (6.32-9.15), 7.41 (6.16-8.91)	7.13 (6.40-7.94), 6.75 (6.06- 7.52)
5.78 (4.40-7.59), 5.75 (4.37-7.55)	6.96 (5.61-8.62), 6.77 (5.46-8.40)	7.62 (6.56-8.85), 7.05 (6.07- 8.19)
1.29 (1.21-1.37), 1.28 (1.21-1.36)	1.30 (1.24-1.36), 1.27 (1.21-1.33)	1.49 (1.44-1.55), 1.43 (1.37- 1.48)
1.28 (1.10-1.50), 1.29 (1.11-1.51)	1.20 (1.10-1.31), 1.19 (1.09-1.29)	1.34 (1.26-1.43), 1.27 (1.20- 1.36)
0.94 (0.82-1.08), 0.95 (0.83-1.09)	1.07 (0.96-1.20), 1.07 (0.95-1.20)	1.18 (1.10-1.28), 1.16 (1.07- 1.25)

Table 19: Country Specific Inflation Adjustment

Year	Consumer Price Index
1996	81.6
1997	83.2
1998	84
1999	84.5
2000	85.7
2001	87.4
2002	88.6
2003	89.6
2004	91
2005	92.5
2006	93.9
2007	96.1
2008	98.6
2009	98.9
2010	100
2011	102.1
2012	104.1
2013	105.7
2014	106.6
2015	106.9

Table 20: 1-year prevalence of lung cancer, per 100000, RKI

Age	Sex	
	Female	Male
0-44	1.9	1.8
45-54	22.5	32.3
55-64	55.8	98.3
65-74	70	175.9
75 and older	52.4	180.7

Table 21: Population details from Federal Statistical Office, 2013

	male	female
0-44	21154854	20310303
45-54	6766463	6562237
55-64	4990036	5123416
65-74	4381169	4916364
75+	2819903	4726857
All ages	40112425	41639177
Overall	81751602	

Table 22: Prevalence of Lung Cancer (per 100.000)

Age	Sex	
	Female	Male
0-44	4,3	3,9
45-54	53,7	69,3
55-64	136	228,2
65-74	180,1	438,8
75+	146,2	457,2

Table 23: Prevalence of CHD, RKI 2006

Age	Male	Female
<15	0.00%	0.00%
16-24	0.00%	0.00%
25-34	0.00%	0.00%
35-39	0.00%	0.00%
40-49	3.00%	1.60%
50-59	6.90%	1.80%
60-69	19.50%	10.80%
70-79	30.50%	15.50%

Table 24: German population, 31.12.2010

	Male	Female
<15	6012584	5709686
16-24	4275570	4079746
25-34	4965366	4827786
35-39	2517194	2449650
40-49	7004721	6720579
50-59	5850928	5844062
60-69	4391067	4640281
70-79	3676135	4479578

Table 25: Prevalence of CHD

Age	Male	Female
18-29	0,50%	0,70%
30-44	2,20%	0,90%
45-64	9,60%	4,30%
65+	28,20%	18,40%
All ages	9,90%	6,70%

Table 26: Population prevalence for COPD in Germany

Age	Male	Female
40-49	0%	2.50%
55-59	10.70%	2.90%
60-69	8.90%	4.40%
70+	19%	6.20%
population prevalence of GOLD stage II or higher COPD		

Table 27: Prevalence of Stroke

Age	men	Women
<15	0.00%	0.00%
16-24	0.00%	0.00%
25-34	0.00%	0.00%
35-39	0.00%	0.00%
40-49	0.70%	1.10%
50-59	1.80%	0.80%
60-69	5.40%	3.10%
70-79	8.10%	6.30%

Table 28: Table2 of Kolominsky-Rabas et al. 2006

TABLE 2. Direct Cost of First-Ever-in-a-Lifetime Ischemic Stroke by Time-Horizon in SHI in Germany (in year 2004 EUR)

Horizon	Men		Women		All	
	Undiscounted	Discounted	Undiscounted	Discounted	Undiscounted	Discounted
1 y	15 566	15 566	14 799	14 799	15 140	15 140
5 y	31 405	30 159	30 817	29 582	31 077	29 837
10 y	40 905	37 711	39 097	36 176	39 921	36 873
Lifetime	54 552	45 549	47 596	41 304	50 507	43 129
95% CI#	(46 983; 63 670)	(40 673; 50 951)	(41 685; 54 568)	(37 127; 45 925)	(44 901; 56 940)	(39 312; 47 187)

#One-way sensitivity analyses on the 95% CI of life-expectancy poststroke.

Table 29: Costs of interventions

Interventions	Costs	Description
Self-help books and booklets	3.5 - 39.8 €, mostly between 5€ and 20€, value 12.50 € was assumed	unclear who pays for it
	0 for the smoker	booklets from health organizations
Proactive telephone support	0.14 €/Min - 0.42 €/Min	
Internet support, computer based intervention	up to 190€	payment for a commercial single supplier
	0 for the smoker	online interventions from health organizations
CDs, DVDs	8.99-99.95€ (DVDs)	probably the smoker has to pay for it
	6.90-59.80€ (CDs)	

Table 30: Uptake of interventions (data available for Germany)

Intervention name	Uptake
OTC Mono NRT	8.07%
OTC Combo NRT	3.23%
Varenicline (standard duration)	0.67%
Varenicline (extended duration)	0%
Bupropion	0.13%
Specialist behavioural support: one-to-one	1.80%
Specialist behavioural support: group-based	0.90%
Telephone support: pro-active	0%
Printed self-help materials	13.30%
Brief physician advice	4.60%

Table 31: PAF for relevant diseases regarding passive smoking, children

	Disease	Age	PAF
Children	Lower Respiratory Infections	0-3	0,19
	Otitis Media	0-4	0,12
	Asthma	0-8	0,14

Table 32: PAF for relevant diseases regarding passive smoking, adults

	Disease	PAF	
		Men	Women
Adults	Asthma	0,11	0,13
	Lung Cancer	0,01	0,02
	Ischaemic Heart Disease	0,04	0,05

Table 33: Population by age and sex, Germany 2012, (ages 0-5), see also Table 1

Age	Males	Females
0	345979	328417
1	339576	322307
2	346208	328653
3	341942	323509
4	351459	333821
5	352393	333068

Table 34: Country Specific Inflation Adjustment (important for conversion from 1996 to 2000 values), see also Table 18

Year	Consumer Price Index
1996	81.6
1997	83.2
1998	84
1999	84.5
2000	85.7
2001	87.4
2002	88.6
2003	89.6
2004	91
2005	92.5
2006	93.9
2007	96.1
2008	98.6
2009	98.9
2010	100
2011	102.1
2012	104.1
2013	105.7
2014	106.6
2015	106.9

Table 35: Proportion of smokers who are employed (employment among smokers, Table 1 of Schunck et al. 2012)

Table 1: Descriptive statistics on smoking and demographic characteristics of multivariate sample

	Observations (N x t) = 65,823		Observations, employed (N x t) = 60,645		Observations, unemployed (N x t) = 5,178	
	Mean / %	SD	Mean / %	SD	Mean / %	SD
Gender	53.40%		53.57%		51.37%	
Age	41.43	10.29	41.30	10.09	42.94	12.25
Smoking	36.68%		35.47%		50.95%	
Subjective health	3.57	0.86	3.60	0.83	3.21	1.01
Sickness absence (days)	8.39	22.89	8.10	21.91		
Income						
1. quintile	14.04%		11.47%		44.11%	
2. quintile	17.91%		17.38%		24.10%	
3. quintile	21.43%		21.94%		15.49%	
4. quintile	23.26%		24.41%		9.73%	
5. quintile	23.36%		24.80%		6.57%	
Education						
Inadequately completed / general elementary	12.21%		11.22%		23.74%	
Lower secondary	49.74%		48.92%		59.33%	
Upper secondary	15.09%		15.68%		8.13%	
Higher education	22.97%		24.18%		8.81%	
Employment						
Full-time	70.72%		76.76%			
Part-time	16.50%		17.91%			
Marginal	4.91%		5.33%			
Unemployed	7.87%					
Average length of unemployment spell(months)					19.86	21.73

Source: SOEP 1998-2008, own computations, unweighted.

Note: income quintiles are not evenly distributed, as their computation is based on the whole SOEP sample.