THE COST-EFFECTIVENESS OF VARENICLINE IN SMOKING 
CESSION IN DENMARK

**OBJECTIVES:** From a Danish perspective to analyse the incremen
tal cost-effectiveness of the pharmacological smoking cessa-
tion therapy including counselling using varenicline (Champix®) 
compared with bupropion SR (Zyban®), nicotine replacement 
therapy (NRT) or smoking cessation courses (group based coun-
seling).

**METHODS:** A Markov model was developed using a 
hypothetical Danish cohort of smokers who made a single quit 
attempt (cycle length 1 year). The direct costs of smoking cessa-
tion and treatment of smoking-related diseases (COPD, lung 
cancer, CHD, stroke and asthma exacerbations) were included 
(2006-prices). Future costs were discounted at 5%. The incre-
mental cost-effectiveness was calculated as costs per quitter and 
costs per QALYs gained. The evidence for quit rates included 
head-to-head trials for varenicline versus bupropion, a Cochrane 
review of NRT (Stead et al., 2008) and a Danish cohort study of 
smoking cessation courses (Kjaer et al., 2007). The time horizons 
applied were 20-year and lifetime. **RESULTS:** Modelling results 
revealed that varenicline resulted in more quitters and fewer 
cases of smoking-related diseases. In a 20-year time horizon 
(lifetime) cumulative QALYs gained using varenicline were 1,04 
(4237) compared with smoking cessation courses, and up to 
2517 (5600) QALYs compared with NRT. The costs per ad-
tional quitter using varenicline instead of bupropion were 
DKK3060 (20-year), whereas varenicline was cost-saving com-
pared with NRT and smoking cessation courses. With a lifetime 
perspective varenicline was always a cost-saving option in terms 
of cost per quitter. Resulting in more QALYs and fewer costs 
varenicline dominated the other alternatives, when lifetime was 
considered. With a 20-year time horizon, the costs per QALY 
gained for varenicline versus bupropion were DKK30,272, but 
varenicline still dominated NRT and smoking cessation courses.

**CONCLUSIONS:** This cost-effectiveness analysis confirms 
that varenicline is a cost-effective strategy for smoking cessation 
in Denmark. This finding is in accordance with results found in 
Sweden and The Netherlands.

**Abstracts**

**PRS13**

**ESTIMATING EXCESS COSTS OF POPULATION-BASED CASES 
WITH MILD COPD—RESULTS FROM THE KORA F3 STUDY**

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**OBJECTIVES:** Chronic obstructive pulmonary disease (COPD) 
is a common chronic condition that has many systemic effects 
beyond pulmonary problems alone. Our objective was to calculate 
direct medical excess costs of COPD. **METHODS:** Data from 
the population-based KORA survey conducted in the region of Augs-
burg in 2004/05 were used to calculate excess costs of COPD. 
Data were available for 200 subjects with and 2984 subjects 
without COPD. Diagnosis of COPD was based on questions on 
chronic cough for more than three months a year. Direct medical 
costs were calculated based on self-reported resource use with 
regard to physician visits, hospital stays, rehabilitation and drug 
consumption. To adjust for age differences between participants 
with and without COPD, controls that matched subjects with 
COPD in terms of age and sex were randomly sampled from those 
without COPD. To value utilization, recommended national unit 
costs were inflated to 2005 price levels. **RESULTS:** Costs were 
significantly higher in subjects with COPD with regard to total 
costs, drugs and physician visits (< 0.0001), but not for hospital 
stays. With these mild cases, no excess costs of rehabilitation 
were observed. Preliminary analyses showed total direct medical excess 
costs for COPD of about €900 per year, the largest contribution 
coming from drug consumption (€600). **CONCLUSIONS:** Total 
direct medical costs are higher for subjects with COPD, and two 
thirds of these excess costs are due to the use of medications.

**PRS14**

**COST OF ALLERGIC RHINITIS IN PEDIATRIC PATIENTS 
IN MEXICO**

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**OBJECTIVES:** To estimate the direct and indirect costs of aller-
gic rhinitis (AR) in pediatric patients from the perspective of 
patient’s family. **METHODS:** 195 patients (children/adolescents) 
from a third-level public pediatric hospital that do not belong 
to social security system were included in this retrospective, 
cross-sectional cost-of-illness study. Information of demographic 
characteristics, frequency and severity of illness, consultations, 
diagnostic tests, out-of-pocket-expenditure for medication, 
transportation, food and house refurbishment as well as absence 
from work of caregivers and school absenteeism of patients was 
collected with a standardized questionnaire. Additionally, the 
corresponding clinical records were reviewed to confirm the pre-
scribed medications and the sickness evolution. Country level 
costs were obtained applying recent prevalence estimates of AR. 
**RESULTS:** The average annual costs per children are €264.96. 
Assuming that AR prevalence in this age group ranges from 
18.5% to 42.1%, the costs of AR in Mexico range from €623.52 
to €1,418.92 millions annually. For adolescents the average 
annual costs per patient are €278.81, assuming AR prevalence 
goes from 21.3% to 41.3%, the country level costs range from 
€640.61 to €1242.11 millions annually. For both age groups 
direct costs are responsible for 97.4% and 98.7% of the expen-
ditures respectively, being medications the main cost driver. 
Antihistamines represent 38.1% and 33.6% of the medication 
costs for children and adolescents respectively. House refurbish-
ment was the most relevant cost factor within nonmedical direct 
costs, however, only 30% of the caregivers mentioned had had 
this type of expenditure. There was no difference in costs accord-
ing to illness severity, although the school absenteeism was 
twofold in children. **CONCLUSIONS:** The economic burden of 
AR in Mexico is important since 50% of health expenditure 
comes from out-of-pocket. Nevertheless these results could 
underestimate the real cost of illness because parents not neces-
sarily accomplish the recommendations of pediatricians related 
to medications and house refurbishment.

**PRS15**

**THE HOSPITALIZATION COST OF PATIENTS WITH CHRONIC 
OBSTRUCTIVE PULMONARY DISEASE (COPD) IN THE 
UNIVERSITY HOSPITAL OF ALEXANDROUPOLIS, GREECE**

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**INTRODUCTION:** Patients with COPD consume considerable 
health care resources due to their lung disease and frequent 
comorbidities. **OBJECTIVES:** To estimate the hospitalisation cost 
of patients suffering from COPD in the department of pneumonol-
yogy of the university hospital of Alexandroupolis, Greece. 
**METHODS:** The study sample consisted of all the patients, 142 in