Abstracts A463

analysis is made in the societal cost perspective, adding direct medical costs charged both on the National Health Service and the patient, since orlistat is not reimbursed. Costs and health benefits are discounted at a 3.5% annual rate. RESULTS: The treatment with orlistat of the Italian obese population (estimated in more than 4 million subjects), produces an estimated average increase in quality-adjusted life expectance of 0.05 (0.035-0.065) QALY/patient, an estimated reduction of cardiovascular events and diabetes onsets at an estimated overall increased cost (based on the current orlistat public price) of about 12 (1.7–13.7) million Euro in 10 years. On the Impaired Glucose Tolerance (IGT) patients subgroup (283,000 people), the benefits are relatively larger, and they come at an increased cost of 608 (-1.6-918) thousands Euro. Estimated average (95% CI) cost-utility incremental ratios are 60.8 (9.2-84.5) and 16.34 (-43.5-27.54) thousand Euro/QALY for the whole cohort and the IGT subpopulation, respectively. CONCLUSION: Orlistat shows a good pharmacoeconomic profile, especially in IGT patients, with a cost-utility of 16.340 Euro/QALY. This value is lower than that of several therapeutic strategies commonly accepted in developed countries.

POB4

## GEMCAS MODEL—A DECISION ANALYTIC MODEL ASSESSING THE COST-EFFECTIVENESS OF TREATMENTS FOR **OBESITY AND ASSOCIATED CARDIOVASCULAR RISK FACTORS**

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OBJECTIVES: Obesity, hypertension and dyslipidemia (low HDL-cholesterol, high triglycerides) are known risk factors (RF) for the development of cardiovascular diseases and diabetes mellitus type 2 (DM). The aim of the study was to develop a decision analytic model as a tool to assess the cost-effectiveness of treatment options of obesity and associated cardiovascular risk factors. METHODS: As part of the German Metabolic and Cardiovascular Risk Project GEMCAS a decision analytic model from the German payer's perspective was developed. RESULTS: The model has a cycle length of one year and consists of nine health states (HS): (HS1) DM without complications and no further RF; (HS2) DM without complications and one further RF (HS3) DM without complications and 2-4 further RF (HS4) DM with microvascular complications (HS5) DM with macrovascular complications (HS6) healthy (HS7) 1-4 RF (HS8) post myocardial infarction or stroke (HS9) death. Annual costs have been assessed for each health state as well as for transitions due to myocardial infarction or stroke: (HS1) 626 Euro (HS2) 794 Euro (HS3) 962 Euro (HS4) 6.276 Euro (HS5) 3.633 Euro (HS6), 0 Euro (HS7), 336 Euro (HS8) 1.710 Euro, transition costs for myocardial infarction are 4.560 Euro and for stroke 4.780 Euro. Target population has a defined risk profile and transition probabilities are calculated using the Framingham Risk Equation for myocardial infarction and stroke. Additionally an independent effect of obesity according to the INTERHEART study was assumed. The development of DM was calculated based on the risk equation from San Antonio Heart Study. CONCLUSION: The presented model is a valuable tool to assess the costeffectiveness of different treatments options and can be adopted for new interventions easily.

POB5

## QUANTIFYING THE QUALITY OF ECONOMIC EVALUATIONS OF OBESITY INTERVENTIONS: A CRITICAL APPRAISAL OF THE LITERATURE

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**OBJECTIVES:** Given the increasing frequency of obesity and the costs associated with it, it is vital to determine which interventions are effective and cost-effective versus the alternatives. A crucial step in both cases is a critical appraisal of the literature. This study examined the quality of economic evaluations (EE) of obesity interventions using a quantitative approach. METHODS: Economic evaluations were selected using the NHS Economic Evaluations Database (NHS EED, York UK)(1995-2006). Quality was based on the method by Chiou (2003) because its development involved many health economists and it provides an overall quality score (range: -1100) using 16 criteria. Associations between study characteristics and quality were examined using regression analysis. Characteristics included publication year, type of intervention (including diet, behaviour, medicine, surgery, combined intervention), source of effectiveness data (single study, literature review), country of evaluation, and source of funding. RESULTS: Thirty-four EEs were identified and all of them fulfilled only some criteria. The most common weaknesses were no discussion of potential biases and inappropriate time horizon or discounting method. Mean overall score was 52 (range: 24–76, SD: 13). Recent EEs were better than older ones (+1.5 points/year) and European EEs were better (15 points) than non-European ones. Source of effectiveness data and source of funding were not associated with quality after adjustment for year and country. Type of intervention was never associated with quality. **CONCLUSION:** The average quality of EEs seems moderate given a score of 52/100. There is much room for improvement and examination of individual criteria is indispensable in achieving this. Determination of overall quality scores is not an adequate substitute for a critical appraisal. Sometimes a single weakness in a "very good" EE can be fatal and render cost-effectiveness estimates useless. In contrast, elements of a "poor" EE can be valuable when determining the costeffectiveness of an intervention.

## **PAIN**—Clinical Outcomes Studies

**PPNI** 

## INCIDENCE OF ACUTE PAIN IN TURKEY

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OBJECTIVES: Despite being a common problem, there is no published epidemiological data on pain in Turkey. This large scale survey had the main objective of demonstrating the incidence of acute pain, but also sought to explore how individuals perceive their pain, the impact it had on their lives, their perception of the attitudes of others towards their pain, treatments received and the adequacy of treatment. METHODS: Screening interviews identified respondents aged ≥18 years with acute pain, for in-depth interviews. It addressed the following aims: a) estimating the incidence of acute pain in Turkey; b) quantifying causes of acute pain; c) exploring the demographics of acute pain; d) exploring the impact of acute pain on individual's quality of life and daily activities e) understanding current treatment practices. RESULTS: Six percent of the respondents had acute pain. Sixty-seven percent of the 313 respondents willing to participate, had pain due to another disease, 33% of them did not have any disease related to