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BACKGROUND: In cost-effectiveness models of oncology treatments, projected mortality rates for the patient population are often compared with those from the general population to validate their clinical plausibility. For partitioned-survival models, a single age cohort is commonly used to represent the trial population. It is often considered clinically implausible when the corresponding age-specific life-table mortality rates for the general population are higher than the projected mortality rates of the trial population. **OBJECTIVES:** To evaluate the implicit assumption that the mortality rates for a patient population comprised of multiple single age cohorts are close to the corresponding mortality rates for a single age cohort. **METHODS:** This analysis projected the number of deaths and size of at-risk population for each single age cohort for a general male adult population aged 45-100 (mean age=61) from UK life tables. Based on these estimates, the projected annual mortality rate for the corresponding UK population was calculated for a 30 year period and then compared with the life table age-specific mortality rates between 61-91 years. **RESULTS:** The mortality rate of the selected male adult population at baseline differs from the life table mortality rate for a 61 year old (0.9% vs 2.0%). Over the 30 year projection period, the average age of the projected population only increases by 20 years instead of 30, due to higher mortality for older groups. The increase in mortality rates at 10, 20, and 30 years are 2.7, 4.1, and 6.2 times higher using a life table method versus projected mortality rates. Sensitivity analyses using different population subgroups showed similar results. **CONCLUSIONS:** Age-specific mortality rates from a single age cohort do not reliably represent the mortality rates for a trial population. For cost-effectiveness model validation, projection of mortality rates from a comparable general population should be used instead.

PRM33

HEALTH ECONOMIC COSTING METHODS AND REPORTING IN AUSTRIA

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OBJECTIVES: With increasing healthcare costs comes an increased need for economic evaluations. Standardising their methods including the use of unit costs are important to make economic evaluations a valid tool for decision-making. This review describes the status quo of economic evaluations in an Austrian context, focusing on their costing methods. **METHODS:** Relevant analysis of the Austrian health economic evaluations was conducted. Evaluations were collected via systematic review of peer-reviewed and grey literature published in English or German between 2004-2015. The quality of costing was assessed using criteria adopted from national and international guidelines for economic evaluations. **RESULTS:** A total of 93 economic evaluations were included, a relatively low number when comparing internationally. Regarding reporting, 60% of the studies did not state the study perspective, 25% did not provide the year of the costs, and 41% did not comprehensively report the applied unit costs, with partial economic evaluations being less likely to meet reporting standards than full economic evaluations. The costs used in different studies for the same interventions were inconsistent. When standardized information was used to derive unit costs, it mostly came from institution-based accounting, reimbursement information, tariffs, or market prices. Micro-costing was only conducted in 15 studies. Reported study funding sources pointed out the relative importance of the pharmaceutical industry compared to public financing of economic evaluations. **CONCLUSIONS:** This review highlights the lack of consistency in costing methods and reporting in economic evaluations in Austria. This has implications for the usability of the results to support decision-making and for between study comparisons. National guidelines should be updated to provide more specific guidance to improve the comparability and quality of future studies. A unit cost library containing generic unit costs for health and social care services should be set up in Austria, similar to those in the UK and the Netherlands.

PRM34

WHICH COSTS MATTER? COSTS INCLUDED IN ECONOMIC EVALUATION AND THEIR IMPACT ON DECISION UNCERTAINTY: THE EXAMPLE OF ACUTE MYOCARDIAL INFARCTION

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OBJECTIVES: There is considerable variation in the resource categories included in economic evaluations. NICE guidance suggests only costs related to the condition or intervention should be included. However, there is a growing consensus that all health care costs should be included, particularly in extended years of life. Further it is not always clear what costs are related and unrelated to the condition or intervention. We consider the impact on the adoption decision and on the uncertainty around that decision that inclusion of different cost categories confers in the context of MI. **METHODS:** A cost-effectiveness model of patients with stable coronary artery disease (SCAD) was used to consider the impact of including different cost categories on a hypothetical treatment. We consider three costing scenarios: coronary heart disease (CHD) costs only, cardiovascular disease (CVD) costs and all costs. The first two illustrate different interpretations of what might be regarded as related costs. The treatment reduces the risk of potentially fatal events: MI (CHD), ischaemic and haemorrhagic stroke (CVD). Incremental costs and decision uncertainty at different time horizons under different cost category inclusion strategies are estimated. **RESULTS:** At a one year time horizon mean expected incremental costs are highest under the CHD costs only scenario whereas at a twenty year time horizon the highest mean expected incremental cost when all costs are included. At a time horizon of twenty years, the probability of the treatment being cost-effective, at a threshold of £30,000 per QALY, is 70%, 73% and 56% for CHD costs, CVD costs and all costs scenarios respectively. **CONCLUSIONS:** This analysis demonstrates that which cost categories to include is an important consideration in generating estimates of cost-effectiveness and decision uncertainty. While the impact on

cost-effectiveness has been demonstrated for a number of disease areas, the consideration of uncertainty is a novel contribution to the literature.

PRM35

COMPARING DIFFERENT DATA ON DISEASE BURDEN IN MULTIPLE SCLEROSIS

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OBJECTIVES: Numerous studies exist on costs of multiple sclerosis (MS). Comparison of results, even with similar study methods, is challenging due to differences in the samples. We investigate methods for explaining and adjusting for differences between samples and results using two large cross-sectional data sets. **METHODS:** In two methodologically very similar European cost-of-illness studies in MS, conducted in 2005 and 2015, patients had provided data on their disease, resource use, work productivity and health-related quality of life. Since disease severity was the strongest driver of costs (and utilities), we compared resource use for patients with mild MS only (Expanded Disability Status Scale 0-3), including 8351 patients from 6 countries. **RESULTS:** Patients in the 2015 study were older (2.8 years) and had longer disease duration (1.7 years). Employment rate in those below 65 years was lower (64% vs. 72%), possibly due to higher age and changes in economic conditions. The 3-month relapse rate was 32% lower, potentially a consequence of higher use of disease-modifying treatments (DMTs; 70% in 2015 vs. 57% in 2005), but also due to a sample with possibly more benign disease. The lower relapse rate might also have contributed to a lower rate of short-term sick leave (19% vs. 24%), hospitalisations (4% vs. 7%) and use of services (7% vs. 14%). However, these changes may also be a consequence of trends unrelated to MS such as more control on sick leaves, fewer inpatient admissions, and less service provision. **CONCLUSIONS:** When comparing patient samples and results in MS, it is not sufficient to control for disease severity alone. Additional factors need to be adjusted for to allow for appropriate comparisons of disease burden, including demographics, disease duration and disease course, as well as external factors such as changes in economic conditions and healthcare systems.

PRM36

VALUING CANCER-RELATED PREMATURE MORTALITY: A COMPARISON OF CONSUMER-LED VERSUS PRODUCER-LED APPROACHES

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OBJECTIVES: Traditionally, cost of illness studies have estimated the indirect costs of disease using the human capital approach (HCA), which essentially views a disease as impacting individuals' production potential. Our aim was to estimate the indirect costs of cancer-related premature mortality in Ireland through an alternative consumer-led input-output (IO) approach, and compare this to the traditional producer-led approach. **METHODS:** The total number of cancer deaths, and cancer deaths by site, in Ireland in 2012 were included. Years of potential productive life lost (YPPLL) were derived in 5-year age groups between 15 and 65 (assumed retirement age). Application of the HCA involved multiplying YPPLL by age- and gender-specific gross mean wages, and adjusting for unemployment and workforce participation. Application of the IO approach included the construction of a final demand vector of lost consumption due to cancer-related premature mortality. This vector was multiplied by sector specific multipliers derived from an Irish 58-sector IO table. Direct, indirect and induced macroeconomic effects were subsequently derived. All costs were expressed in €2012. **RESULTS:** Total cancer-related premature mortality costs in Ireland amounted to €566 million (men = €365 million; women = €201 million), or 3% of 2012 GDP, according to the HCA. The IO approach yielded a direct loss of €277 million to the Irish economy due to foregone consumption. Indirect and induced multiplier effects resulted in a total potential output loss of €512 million due to lost consumption, in addition to €222 million in lost value added and €117 million in lost income. **CONCLUSIONS:** The use of IO analysis to estimate the present value of foregone consumption opportunities due to premature mortality constitutes a viable alternative to traditional producer-led approaches. This approach offers the potential for a more detailed intersectoral perspective on the economic costs of disease and estimates a wider spectrum of macroeconomic effects.

PRM37

SPILL OVER ECONOMIC IMPACTS ON FAMILIES OF CHILDREN RECEIVING HOSPITAL-BASED CARE

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OBJECTIVES: Families often incur significant out-of-pocket (OOP) costs associated with healthcare for their children. In addition, a child's poor health can impact caregivers' health and quality of life. These "spill-over" impacts are often ignored in economic evaluations. Our goal is to develop and test a comprehensive tool that combines existing and newly developed surveys to capture all economic burdens on caregivers of children who receive hospital based care. **METHODS:** Surveys to caregivers (n=70) of children (ages 0 to 18) were administered immediately after initial hospital care, at 6 weeks and 3 months follow-up. Surveys measure direct OOP health care costs (deductibles, co-insurance, co-pays and other non-reimbursable medical expenses), indirect costs associated with lost productivity (missed work days and lower productivity at work), travel, accommodation, formal, informal caregiver costs and other indirect costs. In addition, surveys measure quality of life among caregivers (EQ-5D-3L). All surveys have been validated previously or whenever validated surveys did not exist, questions were borrowed from large national surveys in the US. **RESULTS:** Surveys took about 15 minutes to complete. Caregivers incurred OOP costs in all categories above, although these costs were not very large relative to the cost of the major inpatient event. There was also evidence that caregiver have a slightly lower EQ-5D scores when compared to the general population (age and sex adjusted). **CONCLUSIONS:** Incorporating spill-over effects to caregivers of patients is important in order to better capture the impacts of a health condition and associated