

OP07 Towards Better Outcomes: New Standard For Placing A Value On Health

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INTRODUCTION:

Cost-effectiveness analysis is probably the most often applied analysis in the field of Health Technology Assessment. Yet, there are major issues related to this analytical approach. Apart from the discussions about discounting, and which type of costs should be included in the analysis, there is discussion about the measurement of the health effects. The dominant economic and decision-making research paradigm that underpins present protocols to value health show flaws and limitations.

METHODS:

All existing generic health instruments (for example, EuroQol five dimensions questionnaire, EQ-5D; Health Utilities Index, HUI; Short Form, SF-6D) used to collect values for health states use a small, fixed set of health domains. Descriptions of health states are created based on these domains and their levels. Subsequently, these descriptions are valued with special preference-based methods (measuring the quality or importance of something). When developing those instruments, patients' opinions were not actively incorporated in the choice of domains, nor have patients' preferences been considered in assessing weights to the domains and their levels.

RESULTS:

We developed a novel preference-based health measurement methodology that combines the strength of two existing measurement models for subjective phenomena: the discrete choice model and Rasch item response theory (1-3). This new approach is referred to as the multi-attribute preference response (MAPR) model. This is the first generic health preference-based model that is fully based on the perception and reporting from patients (experienced based) and is

insensitive to adaptation mechanisms. Apart from being grounded on measurement theory, the valuation tasks are easy and attractive to perform in a self-completion setting. A first application based on this novel model has been worked out in a mobile app to measure the overall health condition of infants (reported by mothers).

CONCLUSIONS:

Our recently introduced and informative health measurement model overcomes many problems associated with the conventional methods.

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OP08 National Institute for Health Research Health Technology Assessment Programme Research Funding And United Kingdom Burden Of Disease

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INTRODUCTION:

This study compared the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) Programme portfolio of research with the united Kingdom (UK) burden of disease, as measured by Disability-Adjusted Life Years (DALYs).

METHODS:

Design: Cross-sectional study.

Setting: The HTA Programme cohort included all funded applications (n = 363) received by the HTA Programme during the period 1 April 2011 to 31 March 2016. The sample contained primary research and evidence syntheses, all purely methodological studies were excluded since these are not comparable to the other study types.

Main Outcome Measure: Proportion of spend for each of the twenty-one Health Research Classification System (HRCS) health categories were compared with burden of disease in the UK calculated using 2015 DALY data from the Institute for Health Metrics and Evaluation (IHME) Global Health Data Exchange (GHDx).

RESULTS:

The funded HTA Programme projects totalled about GBP397million research spend, which broadly reflected the UK DALY burden. Overall, there was less than 5 percent difference between the actual and predicted programme spend based on the burden of disease in the UK in most instances (seventeen out of the twenty-one HRCS Health Categories).

The largest categories of apportioned spend were Cancer (accounting for 12.1 percent of portfolio), and Mental Health (11.8 percent of portfolio) which particularly reflected the 9.8 percent burden of disease to the UK. Most notable deviations from DALY, where spend was lower than disease burden, were in the Cancer, Cardiovascular and Musculoskeletal categories; which may reflect the importance of other, notably charity, funding.

CONCLUSIONS:

The HTA Programme spend broadly aligns with burden of disease as measured using DALYs. Discrepancies were

expected owing to the programme remit and its approach to commissioning research to address market failure particularly in areas that are not already well supported by research charities or industry. Regular review of DALY data during research prioritisation and commissioning allows the HTA Programme to identify and address shortfalls in disease areas and to balance its portfolio.

OP11 Structural Uncertainty In Economic Modelling For Smoking Cessation

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INTRODUCTION:

Guidance for developing economic models recommend that model structure is carefully considered, and assumptions varied in sensitivity analysis (1). Models in smoking cessation have typically used cohort-level approaches, although recently discrete event simulations (DEs) have been developed (2). DEs allow additional flexibility such as modelling changing risk over time, and recurrent events. Our aim was to explore the impact of varying model structure and assumptions on the cost-effectiveness of smoking cessation programs.

METHODS:

We built a cohort state-transition model which related mortality to smoking status and considered the prevalence (based on smoking status) of five comorbidities associated with smoking, each of which has an associated cost and quality of life decrement. We additionally built a patient-level DES, using the Discretely Integrated Condition Event framework (3). The DES used the same data as the cohort model, except considering incidence for comorbidities rather than prevalence. We considered a population of