Good example of case study on economic evaluation; describe the four types of eco...

Technology, Innovation

\n[toc title="Table of Contents"]\n

\n \t

\n[/toc]\n \n

Answer to Q. 1

- “ Cost minimisation analysis - outcomes equivalent”: Maximizing health outcomes is the important goal as per the economists. But, keeping the costs of public health interventions, programs, and policies and from an economist’s perspective, low is an important goal. The 1st type deals with problem identification. Economic impact analyses are sometimes called “ cost of illness estimates,” or “ impact analyses.” Normally annual total costs for a group, or cohort, of people with the disease, regardless of when the disease first occurred. This is called prevalence-based approach.

- cost effectiveness analysis : Cost-effectiveness analysis (CEA) describes consequences in clinical cases detected such as natural units, or life-years (LYs) gained. A variant of CEA, called cost-utility analysis (CUA) measures consequences in terms of disability adjusted life years (DALYs) or quality-adjusted life-years (QALYs). The use of cost-effectiveness analysis in making decisions about the allocation and efficiency of resources to induce lower-level decision makers to change their behaviours and practices. These complex interventions are being increasingly considered by policy-level

decision-makers for improving health care quality and outcomes. Clinical outcomes are converted into utility scores by using a utility measurement instrument such as the SF-6D or the EuroQol (EQ-5D) to estimate quality-adjusted-life-years (QALYs). Alternatively other utility measures such as healthy-years-equivalent (HYE) may be used.

- Cost utility analysis: A cost-utility analysis is defined as a type of cost-effective analysis that compares different procedures and outcomes relative to a person's quality of life. Since the inception in the early 1990s of cost-utility measurements, there has been much controversy over methods used to determine these measures and the usefulness of these measurements.. It compares the degree to which quality of life is improved per dollar spent. A quality-of-life index is used to compare interventions, including quality-adjusted life years. .

- Cost benefit analysis: In this step, the costs of an intervention as well as the benefits it provides are assessed. The two main types of this assessment are benefit-cost analysis and cost-effectiveness analysis. In benefit-cost analysis, program costs and benefits are converted into dollars. In cost-effectiveness analysis, program costs are in dollars but benefits are left in some natural unit, like life years saved. A special type of cost-effectiveness analysis—called cost-utility analysis—includes only health outcomes in the analysis. This particular economic evaluation depends on who makes the decision about which intervention to use. You may refer to Comparison of Various Economic Evaluation Models

Answer Q 2

A cost-minimization analysis (CMA), cost benefit analysis (CBA), cost effective analysis (CEA), or cost utility analysis (CUA) can help choose among multiple alternative treatments. The type of problem guides the choice of analysis. If all treatments have equivalent effects, a CMA, which focuses only costs, can help choose the least expensive treatments. For ex., if Medication A and Medication B have the same success rate in treating a disease, a CMA might find that medication A should be used because it costs $200 less. If the potential effects are different but easily translate to monetary terms (eg. Dollars, yen, pounds) a CBA is suitable. All costs and rewards must be in equivalent monetary terms and present day values (ie. Net present value). So, for instance, A CMA may find that Medication A costs $ 300 but potentially could save $ 1000 from preventing lung disease (a net benefit of $ 700 = $ 1000 - $ 300) to be favourable to Medication B that costs $ 100 but could save only $ 400 (a net benefit of $ 300). However, if all the potential rewards do not translate easily into pure monetary terms, a CEA (which measures rewards in simple clinical units such as life years saved, deaths avoided, or operations avoided) or a CUA (in rewards of health status measures like QALYs or utilities) is more useful. A CEA and CUA will measure and compare the costs and rewards of each alternative separately by using incremental cost-effectiveness (or cost-utility) ratios.

Answer Q 3

Economic evaluation provides structured information but is not intended to be the only information used in decision making. After considering all the

advantages and disadvantages of CEA and CUA, CUA is recommended for Thai HTA guideline to be the method of choice when data and resources are available, or when possible, since it provides a more complete picture than the other alternatives. However, CEA is more appropriate in case only intermediate outcomes of the compared alternatives are available. The difficulties can be divided into two major categories, which are general difficulties and CEA or CUA technical difficulties. To overcome these difficulties, efficient resource allocation is needed. For instance, human capacity building seems to be the very first step that should be taken to strengthen the economic evaluation in health care.

Bibliography

CENTRE FOR REVIEWS AND DISSEMINATION, 2009. 5. 1 INTRODUCTION TO SYSTEMATIC REVIEWS OF ECONOMIC VALUATION. [Online] Available at: http://www. york. ac. uk/inst/crd/SysRev/!SSL!/WebHelp/5_1_INTRODUCTION_TO_SYSTEMATIC_REVIEWS_OF_ECONOMIC_EVALUATIONS. htm[Accessed JANUARY 2009].

Heart Disease & Stroke prevention, n. d. Why care about economics within the public health. [Online] Available at: http://www. cdc. gov/dhdsp/programs/nhdsp_program/economic_evaluation/Module_I/Podcast_I. pdf

Johns Hopkins Bloomberg School of Public Health, 2007. Concepts in Economic Evaluation. [Online] Available at: http://ocw. jhsph. edu/courses/ConceptsEconomicEvaluation/PDFs/Lecture1. pdf[Accessed 2007].

PhD*, S. N., 2008. Definining Types of Economic Evaluation s26. [Online] Available at: http://www. thaiscience. info/journals/Article/Defining%20types%20of%20economic%20evaluation. pdf

The free Dictionary, 2009. cost utility analysis. [Online] Available at: http://medical-dictionary. thefreedictionary. com/Cost-utility+analysis

The Online journal of issues in Nursing, 2007. Cost-utility analysis : A method for quantifying the value of nurses. [Online] Available at: http://nursingworld. org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No3Sept07/CostUtilityAnalysis. html

William C. Wilson, C. M. G. D. B. H., 2007. Trauma: Critical Care, Volume 2; 1246. [Online] Available at: http://books. google. co. in/books? id= 3H3AIEtvc8YC&pg= PA1246&lpg= PA1246&dq= CMA,+CEA, +CUA+OTHER+factors+for+decision+making&source= bl&ots= p5K6BAZlUh&sig= ivzOcgalnPmTizCvHNwxA7Xk6vQ&hl= en&sa= X&ei= ZHJGVPOaCJWHuAS_o4LoDw&ved= 0CBwQ6AEwAA#v= onepage&q= CMA%2C%20CEA%