Cost-effectiveness

As the practice of medicine undergoes a cost-conscious transformation, emphasis on the cost-effectiveness of new therapies and surveillance protocols has increased [1].

Neurosurgery guidelines are developed based on evaluating the most up-to-date evidence. However, the current approach incompletely considers or altogether avoids cost-effectiveness when formulating these guidelines [2].

Future efforts at measuring guideline impact will have to take this perspective into account. The limitations of bibliometrics have also motivated the study for new methods of quantifying impact. The rise of social media as a means of information dissemination has extended into the scientific literature and has led to the creation of an alternative system of analysis termed Altmetrics [3].

Cost effectiveness analysis (CEA) is a form of economic analysis that compares the relative costs and outcomes (effects) of two or more courses of action. Cost-effectiveness analysis is distinct from cost-benefit analysis, which assigns a monetary value to the measure of effect.

Cost effectiveness has become an important factor in the Healthcare system, requiring surgeons to improve efficacy of procedures while reducing costs.

Cost-effectiveness analysis is often used in the field of health services, where it may be inappropriate to monetize health effect. Typically the CEA is expressed in terms of a ratio where the denominator is a gain in health from a measure (years of life, premature births averted, sight-years gained) and the numerator is the cost associated with the health gain.

The most commonly used outcome measure is quality-adjusted life years (QALY).

Cost-utility analysis is similar to cost-effectiveness analysis. Cost-effectiveness analyses are often visualized on a cost-effectiveness plane consisting of four-quadrants. Outcomes plotted in Quadrant I are more effective and more expensive, those in Quadrant II are more effective and less expensive, those in Quadrant III are less effective and less expensive, and those in Quadrant IV are less effective and more expensive.

Transferring patients with intracerebral hemorrhage to centers with specialized neuro-ICUs is cost-effective if observational estimates of the neuro-ICU-based functional outcome distribution are accurate. If future work confirms these functional outcome distributions, then a strong societal rationale exists to build systems of care designed to transfer intracerebral hemorrhage patients to specialized neuro-ICUs [4].

see Cost effectiveness in surgical treatment for trigeminal neuralgia

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