COST-EFFECTIVENESS ANALYSIS

Learning outcome

Learners will be able to define the term and give the reason for its use. (It provides a systematic and transparent framework by which to assess the relative costs and consequences of different interventions. It can be used when the treatment-outcomes are similar in nature, but different in volume.)

Range statement

Middle- and top-level managers will be able to describe the use of this type of analysis to first-level managers and give appropriate examples to support their explanation.

Assessment criteria

(1) Explaining the most common ways in which the ‘benefits’ are expressed, for example, in life-years gained; in terms relating to physiology, mortality and morbidity.

(2) Explaining the ‘problems’ often encountered in analyses of cost-effectiveness, for example, the measurability of programmes and strategies, and the indirect as well as the direct costs over time which have to be calculated or estimated.

(3) Explaining this type of analysis by illustrating with examples, for instance:

\[
\text{Cost per deaths prevented} = \frac{\text{Annual programme costs}}{\text{Case fatality rates (5,0\%) x efficiency of vaccine (85,0\%) x number of people vaccinated \times probability of contracting disease (5,0\%)}}
\]

\[
= \frac{\text{Annual programme costs}}{3,600 \times 0.05 \times 0.85} = 7,65. \text{This is the number of deaths prevented.}
\]

To obtain the effectiveness ratio, the cost of the annual programme, for example R100 000, is divided by the number of deaths averted, for example, R100 000 divided by 7,65 = R13,07.

(4) Comparing the example explained with the effectiveness in costs of another strategy for averting the same number of deaths.

Specific outcome

Learners will be able to explain the difference between cost-effectiveness analysis and cost-benefit analysis.
Critical outcome

Learners will be able to:

(1) describe the indexes used to measure the 'effectiveness' of the programme

(2) explain the formula used in this type of analysis