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A UTILITY-THEORETIC METHOD OF COMPUTING VALUE OF DISEASE EFFECTS FOR ECONOMIC EVALUATION OF HEALTH PROGRAM

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The disability-adjusted life years (DALYs) as the measure of utility loss caused by a disease or of disease burden is widely used at present for economic evaluation of health programs throughout the world. Although the measure has several advantages, it has some limitations too. It captures only the effect on health, although a disease can have effects on household income and engender medical and non-medical expenditures as well. It expresses the value of disease effect in terms of years and hence is not suitable for conducting economic evaluation because the other variable involved in evaluation is program cost that is always estimated in money. It also does not consider the opinions of the sick individuals about the effects of disease, which is highly necessary for computing utility. More importantly, the amount of GDP loss obtained using DALY measure is greatly underestimated if the disease or condition causes less mortality but high morbidity (such as HIV/AIDS). In that case the program that is undertaken to eliminate a difficult disease or reduce its burden can rarely be justified because the cost may often exceed the estimated value of DALYs to be averted by the program. As such many essential programs will be rejected if the DALY criterion of evaluation is used. This paper devises an alternative method of computing the three types of effects --- effect on health, on income and expenditure --- based on utilitarian approach and expressing the value in terms of utility and money. It also proposes a formula for conducting economic evaluation of a health program. The formula was applied to the selected patients of costly diseases of a hospital in Bangladesh and it was found that even a very expensive program is fully justified for addressing those diseases. The method was also used to assess the viability of undertaking a HIV/AIDS elimination program. The total value of the disease effects (VODE) as well as DALYs was calculated for selected patients under the program. Comparison reveals that the program is justified if it is judged based on VODE and not if judged based on DALY measure.

Biography

Sushil Ranjan Howlader is the Professor in Institute of Health Economics, University of Dhaka, since 1998, and he was Professor in the Department of Economics, University of Dhaka, from 1995 to 1998. He is the founder Director of the Institute of Health Economics. He has a large number of articles and research works on economic and health economic issues, including economic evaluation and financing of healthcare. He worked as consultant and technical advisor for many organizations and the Ministry of Health and Family Planning, Government Republic of Bangladesh. He also worked for the health sector of Ethiopia and Afghanistan as health economic consultant.

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