



Ruomeng Cui, Hyoduk Shin

## Sharing Aggregate Inventory Information with Customers: Strategic Cross-Selling and Shortage Reduction.

**Aim:** This paper summarizes the deficiencies and weaknesses of the most frequently used methods for the allocation of health-care resources. New, more transparent and practical methods for optimizing the allocation of these resources are proposed. **Method:** The examples of quality-adjusted life years (QALYs) and efficiency frontier (EF) are analyzed to describe weaknesses and problems in decisions regulating health-care provision. After conducting a literature search and discussions with an international group of professionals, three groups of professionals were formed to discuss the assessment and appraisal of health-care services and allocation of available resources. **Results:** At least seven essential variables were identified that should be heeded when applying the concept of QALYs for decisions concerning health-care provision. The efficiency frontier (EF) concept can be used to set a ceiling price and perform a cost-benefit analysis of provision, but different stakeholders—a biostatistician (efficacy), an economist (costs), a clinician (effectiveness), and the patient (value)—could provide a fairer appraisal of health-care services. Efficacy and costs are often based on falsifiable data. Effectiveness and value depend on the success with which a particular clinical problem has been solved. These data cannot be falsified. The societal perspective is generated by an informal cost-benefit analysis including appraisals by the above-mentioned stakeholders and carried out by an authorized institution. **Conclusion:** Our analysis suggests that study results expressed in QALYs or as EF cannot be compared unless the variables included in the calculation are specified. It would be far more objective and comprehensive if an authorized institution made an informal decision based on formal assessments of the effectiveness of health-care services evaluated by health-care providers, of the value assessed by consumers, of efficacy described by biostatisticians, and of costs calculated by economists.