

Part I

Methods

The next seven chapters introduce performance concepts and models of efficiency that can be solved using DEA and incorporate effectiveness into performance model. Chapter 1 provides a brief survey of performance evaluation methods for health care and discusses their strengths and weaknesses for performance evaluation. Efficiency measures and efficiency evaluations using DEA is the subject of Chap. 2. Ensuing sections of the Chap. 2 provide more detail on DEA techniques, including model orientation (input vs. output), and various frontier models such as constant returns to scale (CRS). Chapter 3 introduces variable returns to scale (VRS) model with software illustration. Chapter 4 presents multiplier or weight restricted models (cone ratio or assurance region models). Chapter 5 discusses non-oriented or slack based models and shows how and under what circumstances they can be used. Chapter 6 illustrates panel evaluations (longitudinal) using Malmquist Index. The last chapter of this section, Chap. 7, introduces effectiveness in a performance model and shows the potential misuse of quality variables in DEA models. Finally, other less frequently used DEA-based methods in health care are surveyed at the end.