The principal objective of this talk is to discuss the potential role of industrial engineering tools in health care setting and to illustrate how these tools can improve health care systems. In this talk, we will share our experiences about how we used industrial engineering tools in practice. We will discuss the challenges of accessing adequate health care services in OECD countries, our proposed solutions, and how our framework and its different tools were applied to the Orthopedic Surgery Department in a university hospital and in the IRDPQ rehabilitation center (a rehabilitation center serving the population of the eastern part of the province of Québec, Canada). Moreover, our other projects concerning diagnosis of disease, maintenance and reliability of medical devices, and future projects in health care setting will be explained briefly. Finally, key points for successful implementation of industrial engineering tools in the health care systems will be indicated.