Numerous non-medical professional disciplines, like aviation and military, have used simulation as a basic training approach to ensure candidates’ competency to face routine as well as challenging real-life situations. This talk will present the pedagogical basis and reasoning to use various simulation styles currently used in medical education arenas. In addition to definitions, the presentation will explore the expanding role of simulation in medical education applications and the various techniques of simulation with their advantages and disadvantages. Also, simple ways to enhance the use of simulation in day-to-day practice of basic and clinical, medical education will be identified. Finally, a brief review of best evidence on the impact of simulation in anaesthesia education and practice will be provided.