Medical professionals and educators recognize that Simulation Based Medical Education (SBME) can contribute considerably to improving medical care by boosting medical professionals’ performance and enhancing patient safety. A central characteristic of SBME is its unique approach to making (and learning from) mistakes, which is regarded as a powerful educational experience and as an opportunity for professional improvement. The basic assumption underlying SBME is that increased practice in learning from mistakes and in error management in a simulated environment will reduce occurrences of errors in real life and will provide professionals with the correct attitude and skills to cope competently with those mistakes that could not be prevented. The main message of the lecture is that this assumption, which serves as the driving force of SBME, should also serve as a starting point for critical thinking and questioning regarding the multiple aspects and components of SBME.