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Applying simulation-based learning in cardiology education: a systematic review

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Introduction: The use of simulation within medical education is already a reality. Currently many articles describe the various modes and the impacts self-reported by students. Within cardiology it is no different, but reviews on the subject do not direct to a single area. **Objective:** To review the effects of using simulation for medical education, specifically within cardiology. **Methods:** This is a systematic review according to PRISMA guidelines, using the Ovid MEDLINE, LILACS, CINAHL and CENTRAL databases. Clinical trials reporting the use of realistic simulation for teaching in cardiology were included. Two reviewers independently assessed potential studies for inclusion. Simulation methods and topics with their evaluations were assessed. **Results:** Four hundred and thirty-five articles were initially identified using the search criteria. Seven articles were selected for analysis. Of the seven, three found improvement in cardiac auscultation ability with the use of simulation. One demonstrated improved ability to recognize coronary anatomy, one improved ability during catheterization and one improved ability during angioplasty. Only one showed slight improvement for diagnosis of acute myocardial infarction. In addition to these results, there was also an increase in student adherence and satisfaction. **Conclusion:** Realistic simulation, as a complement to existing curricula, improves the performance of cardiology students.