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## Method For Evaluating Effectiveness Of Simulation Trainings For Minimally Invasive Surgical Manipulations

Minimally invasive surgical manipulations (SM) are currently the key in surgery. These skills are challenging to acquire due to a complex of psychomotor, visuospatial skills under visual and tactile control which are to be developed at the same time. Simulation trainings (ST) help to overcome these difficulties, nevertheless outcome needs to be improved. Laparoscopic intracorporeal suturing (LIS) skills transferring into practice rate ranges from 43,8% to 72,2%. Effectiveness estimation (EE) is needed to define and analyze key success factors and affect them while developing the ST program. According to commonly used Kirkpatrick's approach EE method for trainings should estimate the results achieved by all trainees in practice. But in surgery current EE methods evaluate ST by results in simulation or in small groups in practice. Performing EE for general set of trainees in practice is not used due to high cost and implementation difficulties. The suggested EE method explores structured interview that focuses on key success indicators and allows to estimate ST for general set of trainees in practice. Training methodics are important for effective development SM skills. The demonstrated minimally invasive LIS ST consists of a complex of modern methodics, which led to improvement in developing LIS skills. The EE method was applied to LIS ST and demonstrated skill transferring into practice rate of 89,9%. The suggested EE method and ST methodics can be recommended for implementation in medical simulation training centers.

### Keywords

minimally invasive surgery, laparoscopic suturing, effectiveness estimation

### Biography

Has completed general surgery residency at Kemerovo Medical University in 1990. He is a member of Moscow postgraduate accreditation commission on surgery. Published in excess of 20 SCI papers and postgraduate surgical training programs.

Obtained a number of patents for laparoscopic suturing technique and training methodics. His main research interests are effective methods of surgical manipulation trainings.