A Method of Analyzing Defects in Preoperative Preparation Process Using a Computerized Control System
Maya Novikov, BS, RN; Liat Cohen, MA, RN; Tatyana Fishman, MA, RN

1. Overview
Providing of qualitative and timely care to all patients is a critical goal of management in surgery departments. The significant role in achievement of that goal and in effective functioning of staff in surgical department is an accurate preoperative preparing of patients. Defects in preoperative preparation process often cause to delays and cancellations of operations which lead to such outcomes as: increase of patient risk factors, prolongation of patient waiting time, ineffective usage of operational resources, reduce of patient's satisfaction rate, etc.

2. Purpose
To assess effectivity of a method for reducing rates of defects in preoperative preparation process based on a computerized control system.

3. Method
The method was introduced in 2015 in a tertiary medical center (1,500 beds, 120 wards, 2,500 nurses) located in Israel as part of initiative to improve the effectivity of operations department.

The method provides a way of analyzing reasons of delays and cancelations of operations causing by defects in preoperative preparation process.

The method consists of introduction of computerized control system for documenting and classification cases of inappropriate preoperative preparation of patients.

The method enables to get summary reports by various criteria, for example, by defects causes, by departments, etc., and this allows to see the whole picture and identify "bottlenecks".

During the period of application of the method, the documenting of cases and sharing reports were performed by nurse of preoperative room of operating department.

The reports were distributed daily to management of surgery departments and contained patients' data and details of inappropriate preoperative preparing.

These reports enabled nurses in charge as well as nursing management to identify the most frequent defects in each surgery department and to correct the preoperative preparation process in those departments.

The main advantages of this method are transparency and availability of information which facilitate the improvement of preoperative preparation process.

4. Results
During the period of application of this method in the medical center, we observed a significant an 80% reduction in the rate of defects in preoperational preparing of patients when compared to the previous year. In addition, during the same period, the number of operations was increased by at least 10%.

5. Conclusion
Institution of system for tracking defects is an effective way to identify bottlenecks across departments and to significantly reduce failures in pre-operative preparation.