

## Effect of ISO 9001-2008 in Reducing the Number of Repeated Tests in Medical Diagnostic Laboratories

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### Abstract

**Background and Objective:** One of the organizations that have proceeded for very high standard quality management programs, ISO 9001-2008, is medical diagnostic laboratories. One of the important goals of most laboratories in the implementation of this standard is to reduce the current costs of repeated tests.

**Material and Methods:** The number of repeated tests was evaluated in biochemistry section (Glucose, Urea, Creatinine, Cholesterol, Triglycerides, AST and ALT) and hormones (T3, T4, and TSH) in three stages (pre-standard implementation, three and nine months after performing program). We analyze the data by Stat data software (version 8) using Pearson chi square test.

**Results:** The percentages of repeated tests for glucose, urea, creatinine, cholesterol, triglycerides, AST, ALT, T3, T4, TSH were 16.5, 2.57, 2.88, 12.7, 14.9, 10.38, 12.6, 3.55, 4.69, 1.85 for the first time and 20.5, 5.56, 5.41, 7.25, 20.0, 27.2, 30.1, 0.3, 6.04, 3.08 for the second time and 8, 8.3, 9.2, 7.1, 12.8, 17.4, 19.5, 0.0, 5.81, 1.01 for the third time, respectively. The changes in statistical analysis of urea, creatinine, cholesterol, AST, ALT, and TSH were significant. The percentage trend of repeated tests for urea and creatinine was increased while for TSH, it was decreased.

**Conclusion:** Due to the nature of the experiments and the principles governing repeated tests, the acceptance and implementation of the ISO 9001-2008 only to reduce costs by reducing the percentage of repeated tests cannot be justified. To implement this process, all aspects of the effectiveness should be considered together.

**Keywords:** ISO 9001-2008, Medical Diagnostic Laboratory, Effectiveness, Cost Reduction