INTERACTIVE 2-STEP TRAINING STRATEGY FOR NURSES TO IMPROVE LONG-TERM QUALITY OF GLUCOSE POINT-OF-CARE TESTING

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Introduction: The nurses have been trained to perform point-of-care testing (POCT) using various methods and interventions. The training have been involved or at least planned with laboratory professionals. An interactive two-step training and management strategy for training nurses to perform POCT was developed. The implementation of the strategy was in blood glucose measurement. The objective of this study was to investigate a long-term influence of training on the quality of blood glucose POCT performed by nurses in the university hospital and primary healthcare units.

Results: Once achieved by training good analytical quality of glucose measurements by nurses was stable long term both in hospital and in primary healthcare units. With the same type of glucometer testing carried out by BLSs the imprecision was only occasionally better (CV% 2.8 - 3.3; P = 0.238, 0.038 and 0.522 in 2010, 2011 and 2012 respectively) than that performed by nurses (CV% 3.2 - 3.7). Recommended analytical quality was met with use of both types of glucometers.

Methods: We studied the performance of the trained nurses at glucose POCT by analyzing the internal quality control results obtained by the biomedical laboratory scientists (BLSs) and the nurses in 2010, 2011 and 2012. The effect of training on the quality of measurements was studied statistically. The results, obtained by Ascensia Contour and Contour glucometers, altogether 16219, were classified into peer groups by users, settings and used lots of strips.

Conclusion: The interactive two-step training strategy for nurses proved to be an effective tool for maintaining the good analytical quality of blood glucose testing in long-term. It optimizes the investment of laboratory resources. The trained nurses reached near-similar good analytical quality to that of laboratory professionals.

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