

Optimizing Nursing Practice with Evidence-Based Protocol for Continuous Glucose Monitoring
Use Among Native American Adults with Type 2 Diabetes

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Abstract

Background: Continuous glucose monitoring (CGM) to improve type 2 diabetes mellitus (T2DM) outcomes is a best practice. Successful implementation requires knowledge and competence for CGM. This quality improvement (QI) project was conducted to increase registered nurse (RN) knowledge and competency for CGM best-practice use.

Methods: This QI project utilized pre/post intervention design to determine the effectiveness of a systematic CGM toolkit (TK). The project site was a primary care clinic exclusive to Native American Tribes in the Eastern region of the United States. Two RNs and a diabetes educator who participated in training for implementation of the CGM TK. The CGM TK included topics for CGM best-practices, checklists and worksheets from the American Association of Diabetes Care & Education Specialists, and an intervention implementation plan for the six phases. Outcomes were measured pre- and 12 weeks post-the training intervention using the technology acceptance model (TAM) questionnaire.

Results: All 3 participants completed the pre/post-tests. Although not statistically significant, the Cohen's d value determined magnitude of difference between the pre and post-test means and showed a medium to very large effect size for all scales except subjective norms. The highest scores showed an increase of an average 14.67 points in participant confidence and competence for using CGM TK in T2DM and showed a very large effect (2.2). The lowest scores, intentions to use CGM in routine T2DM care decreased (average -1.67 points) yet showed a medium effect size (0.5)

Conclusion: This QI project provided significant outcomes and supports a systematic evidence based CGM TK and training for implementing as a practical method to increase RN knowledge

and competency for CGM use. Findings suggest that a systematic protocol to educate nurses on utilization of evidence-based practices may facilitate increased adoption of CGM into their practice.

Keywords: CGM, Native American, technology acceptance model, type 2 diabetes, quality improvement